

Micro biology:

1) All are considered a chemical barrier EXCEPT:

- A. Skin
- B. Acidity of stomach
- C. Antimicrobial proteins
- D. Complement
- E. B+C

Answer : A

2) Kind of cells that are utilized by GI pathogens as a point of entry:

- A. M cells
- B. Goblet cells
- C. Paneth cells
- D. Macrophages
- E. None of the above

Answer: A

3) The term is used to describe the community of bacteria that live in your digestive tract:

- A. Immunoglobulin
- B. Intestinal colony
- C. GI tract microbial colony
- D. Human gut microbiome
- E. Mammalian gut microbiome

Answer: D

4) The M (microfold) cells characterized by all of the following EXCEPT:

- A. It is specialized epithelial cells located at the surface of ileum and in Peyer's patches

- B. Its cytoplasm contains lymphocytes and macrophages cells
- C. They release and store the lysozyme enzyme
- D. Their main function is to engulf foreign bodies at the surface
- E. Its basement membrane is discontinuous

Answer: C

5) Which of the following diseases affects normal microbiota of the gut:

- A. Obesity
- B. Type I diabetes
- C. Atopic diseases
- D. A+B
- E. All of the above

Answer: E

6) Prebiotics are:

- A. Live bacteria
- B. Dead bacteria
- C. Dairy pathogens
- D. Bacterial nutrition
- E. Microbes

Answer: D

7) The primary faecal inhabitants shortly after birth are:

- A. *Cl. difficile*
- B. *Cl. tetani*
- C. *Cl. botulinum*
- D. *Cl. Perfringens*
- E. Bifidobacterium

Answer: E

8) The virulence factor associated with *B. cereus* is:

- A. Edema toxin
- B. Lethal toxin
- C. Protective antigen
- D. Enterotoxin
- E. Theta toxin

Answer: D

9) Choose the INCORRECT STATEMENT

- A. Bacteroids are the primary faces inhabitants shortly after birth
- B. skin, oral mucosa, conjunctiva, and GIT are constantly colonized by microbial communities
- C. Bacterial density increases in the distal small intestine, and in the large intestine increases further more
- D. two main phyla in intestine, Firmicutes and Bacteroids
- E. the microbiota dysbiosis have been found to increase susceptibility to a various types of diseases

Answer: A

10) Which food item is most frequently associated with -the emetic type- of Bacillus cereus food poisoning:

- A. Rice and other cereals
- B. Honey
- C. Lettuce, spinach
- D. Meat dishes and sauces
- E. Canned alkaline foods

Answer: A

11) Which of the following is wrongly matched:

- A. B. cereus- food poisoning
- B. Cl. botulinum- rigid paralysis
- C. Cl. perfringens- gas gangrene

D. *Cl. perfringens* -food poisoning

E. *Cl. difficile* -pseudomembranous colitis

Answer: B

12)The most frequent vehicle of infection for infant botulism:

A. Rice and other cereals

B. Honey

C. Lettuce, spinach

D. Meat dishes and sauces

E. Canned alkaline foods

Answer: B

13)The test of choice for the confirmation of botulism is:

A. ELISA

B. PCR

C. Mouse lethality bioassay

D. Gram stain

E. Nagler test

Answer: C

14)Which of the following causes pseudomembranous colitis:

A. *Clostridium difficile*

B. *Shigella*

C. *Salmonella*

D. *Bacillus cereus*

E. All of the above

Answer: A

15)Infection with *clostridium difficile* is frequently associated with over use of one of the following:

A. isoniazid

- B. Penicillin G
- C. Clindamycin
- D. Vancomycin
- E. Fluconazol

Answer: C

16)A 70-year-old man is hospitalized for an infection and treated with clindamycin. The patient improves and returns to his nursing home. Two weeks later he is rushed to the emergency room with fever and loose, mucoid green stools. The diarrhea is voluminous, and he is having severe abdominal pain. Sigmoidoscopy of his colon reveals yellow-white plaques. What is the most likely event/factor that contributed to this patient's current illness?

- A. Drinking unpasteurized milk
- B. Eating contaminated cold cuts
- C. Advanced age
- D. Administration of antibiotics
- E. Eating food containing high amounts of fat

Answer: D

17)Bacteria that produce toxins that travel along the CNS axons:

- A. Clostridium botulinum
- B. Clostridium perferngis
- C. E.coli
- D. Clostridium difficile
- E. Clostridium infantum

Answer: A

18)Four hours after eating reheated rice at a local restaurant, a 24-year- old woman and her husband both developed excessive vomiting and mild diarrhea. Which of the following organisms is the most likely to be involved:

- A. Salmonella typhi
- B. Clostridium botulinum
- C. E.coli

D. Clostridium difficile

E. Bacillus cereus

Answer: E

19) Wrong about clostridium botulism infections:

A. C. botulism is Gram positive Aerobic motile spore forming rod shaped bacterium that is widely distributed environmentally

B. C. botulism produces toxin in the GIT that is absorbed into the blood stream and binds irreversibly to the presynaptic nerve ending

C. there are seven types of botulinum toxin designated A-G with types A, B and E being responsible for most human disease.

D. in food borne botulism the toxin is produced in food typically canned goods or smoked fish or meat and ingested with the food

E. the mouse lethality assay is the standard test used to detect botulinum toxin in serum, foodstuffs and stool specimens

Answer: A

20) Which of the following is a gram-positive rod that releases an exotoxin that causes flaccid paralysis:

A. Escherichia coli

B. Bacillus anthracis

C. Streptococcus pneumoniae

D. Clostridium tetani

E. Clostridium botulinum

Answer: E

21) Regarding the members of the family Enterobacteriaceae, which one of the following is the most accurate:

A. All members of the family are part of the normal microbiota

B. All members of the family have endotoxin

C. All members of the family are anaerobic

D. All members of the family ferment lactose

E. All members of the family produce enterotoxin

Answer: B

22) Which of the following produce heat-stable and heat-labile enterotoxin:

A. ETEC

B. EPEC

C. EHEC

D. Shigella

E. None of the above

Answer: A

23) The most common cause of hemolytic uremic syndrome (HUS) is:

A. EAEC

B. EPEC

C. O157:NM

D. ETEC

E. O157:H7

Answer: E

24) Heat-labile toxin of ETEC acts by which of the following mechanisms:

A. Attachment and effacement

B. Ribosomal dysfunction

C. None of the above

D. Activation of adenylyl cyclase

D. Aggregative adherence

Answer: D

25) Intestinal infection with which of the following organisms should not be treated with antibiotics:

A. Salmonella typhi

B. Clostridium difficile

C. Escherichia coli 0157:H7

D. Shigella sonnei

E. Vibrio cholera

Answer: C

26) Which of the following bacterial agents has the lowest infective dose for producing gastrointestinal disease in the human host:

A. Enteropathogenic Escherichia coli

B. Enterotoxigenic Escherichia coli

C. Vibrio cholerae

D. Salmonella (nontyphoid serotypes)

E. Shigella flexneri

Answer: E

27) one of the following is a double stranded DNA virus that causes gastroenteritis:

A. Adenovirus

B. Rotavirus

C. HIV

D. Norovirus

Ans: A

28) All of the following are true regarding norovirus except:

A. histopathologic changes are seen in the stomach or colon usually.

B. lesions are noted in the upper jejunum, with broadening and blunting of the villi, shortening of the microvilli.

C. Vomiting is more prevalent among children, whereas a greater proportion of adults develop diarrhea.

D. Diagnosis of norovirus via PCR and EIAs

Ans: A

29) prevention of Norovirus done by:

A. Vaccination

B. Antibiotics

C. personal hygiene and disinfection of contaminated fomites.

D. Fecal transplantation

Ans: C

30) All of the following are true about Rotavirus except:

A. nearly all children are infected with rotavirus by 3–5 years of age.

B. Neonatal infections are often symptomatic.

C. Routine vaccinations decrease the likelihood of infection.

D. vomiting frequently preceding the onset of diarrhea.

Ans: B

31) What is the identity of the organism on S-S agar with forming Black spots
(H₂S production) of the colonies:

A. Staphylococcus Spp

B. E. coli

C. Shigella

D. Streptococcus pyogenes

E. Salmonella

Answer: E

32) Which of the following is Oxidase positive and grows on CIN agar with
gives bull eye appearance:

A. campylobacter jejuni

B. aeromonas hydrophilic

C. verisina

D. E.coli

E. C. difficile

Answer: C

33) About Enteric Fever-Typhoid Fever which one is wrong:

A. Is highly contagious

- B. Zoonotic disease
- C. Carriers are a more important source of contamination
- D. Bacteraemia
- E. Has the capsular Vi antigen

Answer: B

34) For diagnosis of enteric fever during the 1st week of illness:

- A. The organism can be isolated from urine
- B. The organism can be isolated from stool
- C. The organism can be isolated from blood
- D. The organism can be isolated from sputum
- E. Widal test

Answer: C

35) Which of the following is related to typhoid fever:

- A. Water contamination
- B. Meningitis
- C. Intestinal perforation
- D. Gastroenteritis
- E. All of the above

Answer: C & A .Are CORRECT

36) Clinical case/ Salmonella typhi is caused by:

Answer: A food preparer with bad personal hygiene

37) Regarding Salmonella, it is:

Answer: H₂S positive, Urease negative, Citrate positive, Indol negative.

Activity 1:

The term is used to describe the community of bacteria that live in your digestive tract?

- A. Immunoglobulin
- B. Intestinal colony
- C. Mammalian gut microbiome
- D. Human gut microbiome

Ans: D

Activity 2:

Which of the following is a mode of transmission for norovirus, a common cause of viral gastroenteritis outbreaks?

- A. Airborne transmission
- B. Sexual transmission
- C. Fecal-oral route
- D. Vector-borne transmission

Ans: C

Which age group is most susceptible to rotavirus infection, a common cause of viral gastroenteritis?

- A. Infants and young children
- B. Adolescents
- C. Middle-aged adults
- D. Elderly individuals

Ans: A

In humans Bifidobacterium are the primary faeces inhabitants shortly after birth

A. True

B. false

Ans: A

Histology:

1) Which statement is correct regarding the bipolar cells?

- A. They renew the other cells regularly.
- B. They support the receptor cells.
- C. They found in the epithelium of the filiform papillae.
- D. They are the taste receptive cell.

Ans:D

2) What is the best statement describing these Mucus cells ?

- A.They are present in the parotid gland.
- B.Their secretion is rich in digestive enzymes.
- C.They are glycoprotein secreting cells.
- D. They contain numerous basal mitochondria.

Ans:C

3) Electron microscopic examination of the taste buds reveals short triangular cells resting on the basal lamina, what is the function of these cells?

- A. Support the gustatory cells.
- B. Renewal of the receptor cells.
- C. Secrete mucous for lubrication of the mouth cavity.
- D. Receive the gustatory stimuli.

Ans:B

4) What is the correct description of the histological structure of the tongue?

- A. The ventral surface is lined with the masticatory mucosa.
- B. The striated muscles are running circumferentially.
- C. The mucosa of the anterior 2/3 of the dorsal surface is firmly attached to the underlying tissue.
- D. All the lingual papillae contain taste buds that differ in the type of

the taste they receive.

Ans: C

5) The taste buds in CIRCUMVALLATE PAPILLAE receive which type of taste?

- A. Bitter taste only.
- B. Sour taste only.
- C. Sweet and salt taste.
- D. Salt and sour taste.

Ans:A

6) Which of the following cells act as neuron?

- A. Basal cells
- B. Bipolar cells
- C. Supporting cells
- D. Microvilli

Ans: B

7) What is the structural adaptation of the serous salivary acinus to its function?

- A. Numerous basket cells.
- B. Multiple peripheral rough endoplasmic reticulum.
- C. Infranuclear golgi apparatus.
- D. Central secretory vesicles.

Ans: B

8) Modification of the secretion in the salivary glands occurs in which of the following structures ?

- A. Serous cells
- B. Mucus cells
- C. Intercalated duct
- D. Striated and intercalated ducts

Ans: D

9) Which of the following statements is not related to maintain the

integrity of the esophageal epithelium?

- A. Secretion of neutral mucous by the mucosal glands.
- B. Continuous renewal of the epithelium by its basal layer.
- C. Lubricant mucous secreted by the submucosal glands.
- D. Rich vascularity of the epithelium.

Ans: D

10) Which layer contains Auerbach's plexus?

- A. Submucosa.
- B. Lamina propria.
- C. Adventitia.
- D. Muscularis externa.

Ans: D

11) Which functional adaptation doesn't match its corresponding cell?

- A. Oxyntic cells.....increase in the number of tubulovesicular system in active state.
- B. Stem cells...numerous polysomes.
- C. Peptic cells..... Peripheral rER.
- D. Enteroendocrine cells..... Infranuclear Golgi apparatus

Ans: A

12) Which statement describes the histological structure of the gastric rugae?

- A. They are circular folds that disappear during distension.
- B. They are permanent gastric folds.
- C. They are invagination of the mucosal surface into the lamina propria.
- D. They are longitudinal folds of the mucosa & submucosa.

Ans: D

13) Which type of cells is correctly matching its corresponding function?

- A. Peptic cells.....secrete HCl.
- B. Enteroendocrine cells.....renewal of epithelium.
- C. Surface mucous cells.. secrete insoluble mucous.
- D. Parietal cells secrete pepsinogen.

Ans: C

14) Which cells line the intestinal villi of the duodenum?

- A. Enterocytes & Goblet cells only.
- B. Enterocytes only
- C. Enterocytes, Goblet cells & M cells.
- D. Enterocytes, goblet cells& enteroendocrine cells.

Ans: D

15) Which statement describes the histological structure of the gastric rugae?

- A. They are circular folds that disappear during distension.
- B. They are permanent gastric folds.

C. They are invagination of the mucosal surface into the lamina propria.

D. They are longitudinal folds of the mucosa & submucosa.

Ans: D

Activity:

the villi of small intestine contains all of the following except

Choice	Correct answer	Attempt answer
lacteals		
smooth muscle		
capillaries		
paneth cells	☑	✓
goblet cells		

the gastric gland of the pylorus contains all of the following cells except

Choice	Correct answer	Attempt answer
mucas cells		
parietal		
chief cells	☑	✓
endocrine cell		

Pathology :

Lec 1 : esophageal 1

1. One of the following best describes CMV esophagitis:

A. Nuclear viral inclusions usually seen at the ulcer edge.ⁱ

B. Viral inclusions usually seen in endothelial and stromal cells.

C. Upper endoscopy typically shows punched-out ulcers.

D. Upper endoscopy typically shows pseudomembranes.

E. Histology: inflammation, basal cell hyperplasia, and papillomatosis

Ans: B

2. A 60 year old female patient, known case of cancer on her 8th cycle of chemo therapy, presented with mild dysphagia. Endoscopy revealed patches of adherence, gray white pseudomembranous. The most likely diagnosis is:

- A. GERD
- B. Early squamous cell carcinoma
- C. Infectious esophagitis by candidiasis
- D. Infectious esophagitis by HSVE.
- E. Infectious esophagitis by CMV

Ans: C

3. The best management plan for Mallory Weiss tear of the esophagus is:

- A. Endoscopy with cautery.
- B. Will heal spontaneously with no intervention.
- C. Surgical correction.
- D. Proton pump inhibitors.
- E. Antibiotic treatment

Ans: B

4. A healthy lady gives birth to an infant. Upon start of feeding the baby developed frequent regurgitation with bouts of suffocation and cyanosis. After investigations, this baby's most likely diagnosis will be:

- A. Esophageal stenosis.
- B. Hirschsprung disease.
- C. Intussusception.
- D. Achalasia.
- E. Esophageal atresia and tracheoesophageal fistula.

Ans:E

5. 60-year-old man, who is debilitated, HIV positive and bed ridden, complained of dysphagia and odynophagia. Upon endoscopy whitish adherent membranes are seen all over the esophagus, the most likely diagnosis:

- A. Esophageal reflux disease.
- B. Barrett esophagus.
- C. Candida esophagitis.
- D. Cytomegalovirus esophagitis.
- E. Herpes simplex esophagitis.

Ans: C

6. A 22-year-old woman has had multiple episodes of aspiration of food associated with Difficulty swallowing during the past year. A barium swallow shows marked esophageal Dilation above the level of the lower esophageal sphincter. A biopsy specimen from the Lower esophagus shows an absence of the myenteric ganglia. What is the most likely diagnosis?

- A. Primary Achalasia
- B. Barrett esophagus
- C. Plummer-Vinson syndrome
- D. Pyloric stenosis
- E. 2ndry achalasia

Ans: A

7. Of the following statements regarding the esophageal diseases is true except:

- A. Stenosis is more commonly acquired.
- B. Atresia occurs most frequently at or near the tracheal bifurcation
- C. Esophageal stenosis is caused by fibrous thickening of the mucosa
- D. Achalasia-like disease is most commonly caused by Diabetic autonomic neuropathy

E. Esophageal varices can be caused due to parasitic infection in the liver and it represents a fatal condition

Ans: C

8. A patient has had pain for 1 week when he swallows food. Upper gastrointestinal endoscopy shows punched out ulcers in the region of the mid to lower esophagus. The ulcers are round and sharply demarcated, and have an erythematous base, a biopsy is taken and shows multinucleated giant cells. Which of the following is most likely to produce these findings?

- A. Reflex esophagitis
- B. Esophageal candidiasis
- C. CMV esophagitis
- D. Herpes simplex esophagitis
- E. All of the following can cause these features

Ans: D

9. Esophageal atresia is commonly associated with a fistula between esophagus and:

- A. Stomach / B. Diaphragm / C. Bronchus / D. Spleen / E. Lung

Ans: C

10. A 60-year-old patient with liver cirrhosis and portal hypertension who developed sudden massive hematemesis and hypovolemic shock. What is the most likely cause of this bleeding based on this scenario: •

- A. Esophagitis
- B. Esophageal varices
- C. Esophageal cancer
- D. Gastric ulcer
- E. Gastric cancer

11. A patient suffers from prolonged vomiting and then is presented with hematemesis ?

Answer: Esophageal lacerations

Lec 2 : gastric 1

1. What is the classic distribution of the inflammatory pattern typically seen in autoimmune gastritis?

- A. Oxyntic predominant gastritis with atrophic changes and intestinal metaplasia.
- B. Antral predominant gastritis with mildly inflamed oxyntic mucosa.
- C. Cardiac lymphoid aggregates and normal antral/oxyntic mucosa.
- D. Diffuse antral and oxyntic gastritis with intestinal metaplasia of antral mucosa.
- E. Cardiac predominant gastritis with atrophic changes and intestinal metaplasia.

Answer: A

2. Regarding chronic gastritis which of the following statements is TRUE:

- A. Helicobacter pylori gastritis affects predominantly the gastric body.

- B. Autoimmune gastritis causes marked hypergastrinemia.
- C. Helicobacter pylori gastritis can be complicated by pernicious anemia.
- D. Autoimmune gastritis is the most common cause.
- E. Helicobacter pylori causes decrease in gastric acid production.

Answer: B

4. A 72-year-old man takes large quantities of nonsteroidal anti-inflammatory drugs (NSAIDs) because of chronic degenerative arthritis of the hips and knees. Over the past 2 weeks, he has had epigastric pain with nausea and vomiting and an episode of hematemesis. A gastric biopsy specimen is most likely to show which of the following lesions?

- A. Acute gastritis
- B. Adenocarcinoma
- C. Epithelial dysplasia
- D. Helicobacter pylori infection
- E. Gastric Adenoma

Answer: A

5. All of the following statements regarding the chronic gastritis are true except:

- A. H. pylori is the most common cause
- B. Carcinoid tumor could be a secondary outcome of autoimmune gastritis
- C. H. pylori associated gastritis increases the risk of MALToma
- D. Autoimmune gastritis is mediated by type 4 hypersensitivity reaction and it's highly Associated with other autoimmune diseases.
- E. There is high acid production in H. pylori associated pangastritis

Answer : E

6. Autoimmune gastritis is associated with:

- A. male predominance
- B. History of NSAIDS intake
- C. Pan-gastritis
- D. Low gastrin level
- E. Vitamin B12 deficiency

Answer : E

7. Autoimmune gastritis is typically associated with which of the following:

- A. Decreased gastrin levels
- B. Hyperchlorhydria
- C. Pernicious anemia
- D. Mucosa associated lymphoid tissue (MALT) lymphoma •
- E. Spares the body of the stomach

Answer: C

8. Gastritis is commonly associated with all of the following except:

- A. NSAIDS
- B. Chemotherapy
- C. Steroid
- D. Alcohol
- E. Iron

Answer : E

Lec 3: gastric 2

1. All of the following are true regarding peptic ulcer disease (PUD), EXCEPT:

- A. Duodenal ulcers are less associated with helicobacter pylori infection than Gastric ulcers.
- B. NSAIDS can cause peptic ulcer disease.
- C. Upper gastric endoscopy should be done in patients with suspected bleeding PUD.
- D. Proton pump inhibitors are of the treatment options in patients with peptic Ulcer disease.
- E. Stress gastric ulcers can occur in patients with extensive burn ppatients.

Ans: A

2. The most common tumor in the stomach is :

- A. MALToma
- B. Adenocarcinoma

- C. Carcinoid tumor
- D. T-cell lymphoma
- E. Gastrointestinal Stromal Tumor.

Answer: B

3. 52-year-old man was found to have several gastric polyps in the body, ranging in size from 1 to 4 mm. On histology, the polyp is composed of cystically dilated, irregular glands lined by flattened parietal and chief cells. The background mucosa is not inflamed. One of the following statements is TRUE about this type of polyp

- A. If dysplasia is present, it usually transforms to malignancy.
- B. It is associated with Lynch syndrome.
- C. It is usually associated with H. Pylori infection.
- D. It is associated with PPI use.
- E. They are the most common type of gastric polyps

4. Which mutation is mostly associated with hereditary diffuse gastric cancer?

- A. BRCA2. B. CDH1. C. NF1. D. SMARCA4. E. P53.

Answer: B

5. A 67-year-old woman has experienced severe nausea, vomiting, early satiety, and a 9-kg weight loss over the past 4 months. Upper gastrointestinal endoscopy shows that the entire gastric mucosa is eroded and the wall of the stomach is rigid and thickened. Under microscopic examination the cells are discohesive. Which of the following is most likely to be found on histologic examination of a gastric biopsy specimen?

- A. Chronic atrophic gastritis
- B. Primary gastric lymphoma
- C. Intestinal type adenocarcinoma
- D. Granulomatous inflammation
- E. Signet ring cell adenocarcinoma

Answer : E

Lec 4 : esophageal 2

1. All of the following are risk factors for esophageal squamous cell carcinoma, EXCEPT:

- A. Caustic esophageal injury.
- B. Achalasia.
- C. Plummer-Vinson syndrome.
- D. Previous radiation therapy.
- E. Barrett's esophagus

Answer: E

2. One of the following is TRUE regarding gastroesophageal reflux disease (GERD) and reflux esophagitis:

- A. Cannot be seen in infants.
- B. Rings in the esophagus wall are characteristic.
- C. Elevated lower esophageal sphincter tone is the basic mechanism.
- D. Alcohol, smoking and obesity are considered risk factors.
- E. Neutrophilic infiltration of squamous epithelium is the earliest histologic Finding.

Answer: D

3. Which of the following statements is true?

- A. squamous cell carcinoma has a very high association with alcohol and smoking, and it commonly occurs in the lower third of esophagus.
- B. Adenocarcinoma doesn't Arise from a background of Barrett.
- C. The most important management of Barrett esophagus is to do Periodic endoscopy with biopsy to screen for dysplasia.
- D. CMV infects the squamous cells of esophagus
- E. patients with eosinophilic esophagitis don't respond to steroids therapy.

Answer : C

4. Eosinophilic esophagitis is related to:

- A. Pre malignant condition
- B. Viral infection
- C. Allergy to certain food
- D. Congenital disease
- E. Chronic reflux disease

Answer : C

5. The presence of goblet cells in the esophagus is seen in:

- A. Barret esophagus
- B. Squamous cell carcinoma
- C. Candida esophagitis
- D. Early reflux esophagitis
- E. Caustic injury

Answer: A

6. All of the following are risk factors for esophageal squamous cell carcinoma, EXCEPT:

- A. Caustic esophageal injury.
- B. Achalasia.
- C. Plummer-Vinson syndrome.
- D. Previous radiation therapy.
- E. Barrett's esophagus.

Answer: E

Lec 5: intestinal 1

1. Which of the following conditions that cause intestinal obstruction has been incorrectly described?

- A. Volvulus is a congenital disease that can be complicated by infarction to the bowel.
- B. Intussusception is the most common cause of intestinal obstruction in children younger than 2 years and is characterized by a currant jelly stool.
- C. The presence of intussusception in adults is highly suggestive of intraluminal mass or tumor.
- D. Hirschsprung Disease is a defect in colonic innervation. It tends to be more severe in males and more common in females.
- E. Hernia is a protrusion of bowel segment and its mesentery through a defect in abdominal wall.

Answer: D

2. The most common site for Hirschsprung disease is:

- A. Right colon
- B. Anus
- C. Left colon
- D. Sigmoid
- E. Rectum

Answer : E

3. Which of the following conditions results in steatorrhea?

- A. Deficiency of vitamin B12.

- B. Malabsorption of proteins.
- C. Lactase deficiency.
- D. Maldigestion of lipids
- E. Decreased secretion of intrinsic factor.

Answer: D

4. The most important risk for malignancy in large bowel adenoma is:

- A. Duration of the lesion
- B. Architecture
- C. Size
- D. Anatomic location
- E. Number of polyps

Answer : C

5. All of the following are features of celiac disease except:

- A. Associated with HLA-DQ2
- B. Gluten hypersensitivity
- C. Increased risk for small bowel cancer
- D. Onset in children or adult
- E. Microscopically shows increased intraepithelial neutrophils and villous atrophy

Ans: C

6. A 34-year-old woman is bothered by a low-volume, mostly watery diarrhea associated with flatulence. She has experienced a 4-kg weight loss. She has no fever, nausea, vomiting, or abdominal pain. A stool sample is negative for occult blood, ova, and parasites, and a stool culture yields no pathogens. An upper gastrointestinal endoscopy is performed and a biopsy specimen from the upper part of the small bowel shows severe diffuse blunting of villi and a chronic

inflammatory infiltrate in the lamina propria. Which of the following statements is correctly describes this disease?

- A. Anti-endomysial antibody is the most sensitive serological test.
- B. The biopsy should be obtained from the proximal duodenum
- C. The main treatment of choice is corticosteroids
- D. 50% of patients will develop skin lesions called dermatitis herpetiformis
- E. People with HLA-DQ2 and HLA-DQ8 have more genetic predisposition

Answer : E

Lec 6: intestinal 2

1. All of the following are features of diverticulitis except:

- A. Flask shape outpouches
- B. Associated with low-fiber diet
- C. Irregular distribution
- D. Predispose to fibrosis and segment stenosis

Answer: C

2. All of the following favor the diagnosis of ulcerative colitis over Crohn disease except:

- A. Presence of non-caseating granulomas
- B. Continuous inflammation
- C. Superficial mucosal inflammation
- D. Toxic megacolon
- E. Absence of fistula

Answer: A

3. Which of the following is a feature of both UC and Crohn disease?

- A. The presence of non-caseating granuloma in 35% of cases

- B. Stenosis and narrowing of the lumen due to fibrosis in the bowel wall
- C. There is a recurrence after surgery
- D. They have a risk of a perianal fissure development
- E. In colonic involvement, they carry a risk for malignant transformation

Answer : E

4. A clinical study of adult patients with chronic bloody diarrhea is performed. One group of these patients is found to have a statistically increased likelihood for the following: antibodies to *Saccharomyces cerevisiae*, NOD2 gene polymorphisms, TH1 and TH17 immune cell activation, vitamin K deficiency, megaloblastic anemia, and gallstones. Which of the following diseases in this group of patients most likely to have?

- A. Angiodysplasia
- B. Crohn disease
- C. Diverticulitis
- D. Ischemic enteritis
- E. Ulcerative colitis

Answer: B

Lec 7 : intestinal 3

* Not past papers

1. What is the most common site for polyps?

- a) Colon
- b) Esophagus
- c) Small intestine
- d) Stomach

2. What is the term for a polyp with no stalk?

- a) Neoplastic polyp
- b) Non-neoplastic polyp
- c) Pedunculated polyp

d) Sessile polyp

3. What is the term for a polyp with a stalk?

- a) Pedunculated polyp
- b) Sessile polyp
- c) Non-neoplastic polyp
- d) Neoplastic polyp

4. What type of polyps are adenomas?

- a) Neoplastic polyps
- b) Inflammatory polyps
- c) Hamartomatous polyps
- d) Non-neoplastic polyps

5. What type of polyps are inflammatory polyps?

- a) Non-neoplastic polyps
- b) Hyperplastic polyps
- c) Neoplastic polyps
- d) Hamartomatous polyps

6. What is the term for a polypoid mass of inflamed and reactive mucosal tissue?

- a) Recurrent abrasion and ulceration of the overlying rectal mucosa
- b) Solitary rectal ulcer syndrome
- c) Impaired relaxation of anorectal sphincter
- d) Chronic cycles of injury and healing

7. What are the two types of hamartomatous polyps?

- a) Juvenile polyps and Gardner syndrome

- b) Sporadic polyps and Gardner syndrome
- c) Juvenile polyps and Peutz-Jeghers syndrome
- d) Sporadic polyps and Peutz-Jeghers syndrome

8. What is the most common hamartomatous polyp?

- a) Peutz-Jeghers polyp
- b) Juvenile polyp
- c) Gardner polyp
- d) Sporadic polyp

9. What is the term for a hamartomatous polyp that is mostly found in the small intestine?

- a) Gardner polyp
- b) Peutz-Jeghers polyp
- c) Juvenile polyp
- d) Sporadic polyp

10. What is the term for a common polyp that occurs in the 6th to 7th decades of life?

- a) Hyperplastic polyp
- b) Serrated polyp
- c) Inflammatory polyp
- d) Adenoma

1a. Colon	2d. Sessile polyp	3a. Pedunculated polyp	4a. Neoplastic polyps	5a. Non-neoplastic polyps
6b. Solitary rectal ulcer syndrome	7c. Juvenile polyps and Peutz-	8b. Juvenile polyp	9b. Peutz-Jeghers polyp	10a. Hyperplastic polyp

	Jeghers syndrome			
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Lec 8 : Intestinal 4

- Not past papers

1. What are the risk factors for developing colonic adenocarcinoma?

- Low intake of vegetable fiber and low intake of carbohydrates and fat
- High intake of vegetable fiber and high intake of carbohydrates and fat
- Low intake of vegetable fiber and high intake of carbohydrates and fat
- High intake of vegetable fiber and low intake of carbohydrates and fat

Ans: C

2. Which gene mutation is an early event in the development of colonic adenocarcinoma?

- Mutation of the TP53 tumor suppressor gene
- Mutation of the APC tumor suppressor gene
- Mutation of the KRAS oncogene
- Mutation of the BRAF gene

Ans: b

3. What is the classic adenoma carcinoma sequence in colonic adenocarcinoma?

- Mutation of the APC tumor suppressor gene followed by activation of the KRAS oncogene
- Mutation of the TP53 tumor suppressor gene followed by activation of the KRAS oncogene
- Mutation of the BRAF gene followed by accumulation of β -catenin

- Mutation of the APC tumor suppressor gene followed by accumulation of β -catenin

Ans: d

4. Which pathway is associated with microsatellite instability in colonic adenocarcinoma?

- Microsatellite instability pathway due to defects in DNA mismatch repair
- Mutation of the BRAF gene
- Mutation of the TP53 tumor suppressor gene
- APC/ β -catenin pathway with increased WNT signaling

Ans: a

5. What is the macroscopic appearance of proximal colon tumors in colonic adenocarcinoma?

- Annular lesions with constrictions and narrowing
- Polypoid, exophytic masses
- Recto-sigmoid adenocarcinoma
- Adenocarcinoma with necrosis

Ans : b

6. What is the microscopic appearance of colonic adenocarcinoma?

- Dysplastic glands with strong desmoplastic response
- Signet ring cells
- Necrotic debris
- Abundant mucin

Ans: a

7. What are the clinical features of left-sided colonic adenocarcinoma?

- Nausea, vomiting, low-grade fever

- Fatigue and weakness
- Periumbilical pain
- Occult bleeding, changes in bowel habits, cramping left lower-quadrant discomfort

Ans: d

8. What is the most common tumor of the appendix?

- Normal true diverticulum
- Acute appendicitis
- Meckel diverticulitis
- Carcinoid

Ans : d

Physiology :

Intro& movement.

Regarding gastro-esophageal motilities, one of the followings is NOT true: • A. Primary esophageal peristalses are initiated at the pharynx

- B. Relaxation of lower esophageal sphincter is ensured by extrinsic reflexes
- C. The patterns of primary and secondary peristaltic contractions are the same
- D. More tone of pyloric sphincter is achieved when gastric peristaltic contractions are reaching pyloric region
- E. At early stages of gastric movements only chyme of fluid consistency is emptied by pyloric pump activity

• Answer: B

One of the followings is NOT true with regard to the ICCs: '

- A. Are generating action potentials
- B. Are considered as pace maker cells in the gastrointestinal tract
- C. Are under the control of autonomic nervous system
- D. Are connected by gap junctions
- E. Are responsible for generation of basic electrical rhythm (BER) at smooth muscle cells

• Answer: C

With regard to mass contractions at the colon, all the followings are true EXCEPT:

- A. Are mainly controlled by released gastro-intestinal hormones
- B. Have propulsive effect over the content of the colon
- C. Are similar with peristaltic contractions in the small intestine • D. Can induce activation of defecation reflexes
- E. Are initiated by gastro-colic reflexes

• Answer: A

One of the followings regarding control functions of GI is NOT TRUE:

- A. Parasympathetic system generally causes increase in secretions
- B. Sympathetic generally is decreasing blood flow by direct effect over vessels
- C. Basic electrical rhythm (BER) is controlling phasic contraction
- D. Tonic contraction is set by released neurotransmitter
- E. Salivary secretion is increased by intrinsic reflexes

• Answer: E

Which of the following DOES NOT affect blood flow to the GI tract: • A. CCK

- B. Secretin
- C. GIP
- D. CCI
- E. kinins

• Answer: D

About defecation : - A. parasympathetic to muscle of anus - B. Intrinsic reflexes caused by parasympathetic innervation - C. Intrinsic reflexes are strong enough to cause defecation - D. Voluntary act while defecation causes internal sphincter to relax - E. Closure in glottis uses decreasing in abdominal pressure - Answer: A

Choose the correct statement regarding the interstitial cells of Cajal (ICCs):

- A. ICCs are responsible for tonic contraction of GI smooth muscle cells
 - B. ICCs are responsible for the slow action potentials (slow waves) in smooth muscle
 - C. ICCs are neurons that communicate with smooth muscle cells through gap junctions
 - D. ICCs control ENS activity
 - E. None of the above
- Answer: B (about (D) ICCs controled by ENS but not the opposite)

About swallowing, all true EXCEPT:

- A. composed of voluntary and involuntary phases

- B. primary peristalsis is initiated at the pharynx
- C. secondary peristalsis is initiated in the esophagus by reminiscent of food in the esophagus
- D. preceded by relaxation wave to open the lower esophageal sphincter
- E. closure of epiglottis is voluntary
- Answer: E

The remaining food particles in the esophagus initiate: • A. Primary peristalsis

- B. Secondary peristalsis
- C. MMC
- Answer: Secondary peristalsis

One of the following is true with regard to defecation reflexes in normal adult: • A. voluntary control is ensured by relaxation of external anal sphincter

- B. appears as series of voluntary reflexes after the distention of rectum
- C. generate motor activities which are present all the day over the colon
- D. the intrinsic component of the reflex is provided by sympathetic neurons • E. as a result of increased activity of intrinsic reflex, defecation will follow without the voluntary stage of defecation
- Answer: A

All the followings with regard to defecation reflexes are true EXCEPT:

- A. Appears as involuntary intrinsic reflexes by the distension of the colon
- B. They have parasympathetic component that fortifies the contractions of the rectal smooth muscle
- C. As a result of increased activity of defecation reflexes, in normal adults defecation is finally can take place as a voluntary act
- D. Relaxation of the external anal sphincter is ensured by the activity of cranial parasympathetic fibers
- E. The intrinsic component of the reflex is provided by enteric nervous system
- Answer: D

All of the following are true about deglutition EXCEPT:

- A. It is initiated voluntarily
- B. It involves reflex centers in the brain
- C. Respiration is impeded during the esophageal phase • D. It is less effective when lying down
- E. All of the above are true statements • Answer: C

Tracing a food bolus along the GI tract, choose the correct chronological order of motility patterns that this bolus will go through:

- 1. Receptive Relaxation
- 2. Segmentation Contractions
- 3. Primary Peristaltic Wave • 4. Pyloric Pump
- A. 1 , 3 , 4 , 2
- B. 1 , 3 , 2 , 4
- C. 3 , 1 , 4 , 2 • D. 3 , 2 , 1 , 4 • E. 2 , 3 , 1 , 4 • Answer: C

Contractions along the intestine can be described by all EXCEPT:

- A. tonic contractions are set by the activity of interstitial cells of Cajal
- B. the rhythm of segmentation contraction is set by basic electrical rhythm at that segment
- C. segmentation and peristaltic contractions propel chime in analward direction
- D. coordinated movements during peristaltic reflex need intact neural activities of myenteric plexus
- E. increased velocity of chyme propulsion decreasing absorption of fluids

Ans E

One of the following concerning gastric motility is true: • A. After food ingestion, tonic contraction of gastric muscle is decreased

- B. Is regulated by hormone only
- C. Increases by activation of entero-gastric reflex
- D. Increases by inhibition of parasympathetic control • E. Increases by more release of CCK (cholecystokinin) • Answer: A

With regard to haustral contractions at the colon, all the followings are true EXCEPT:

- A. Have propulsive effect over cecal content

- B. Are phasic contractions
- C. Are similar with segmentation contractions in the small intestine • D. Are present all the day
- E. Initiated by activation of gastrocolic reflexes

• Answer: E1

• Wrong about mass contractions:

- A. Causes feces to be forced to move into the rectum • B. facilitated by gastrocolic and duodenocolic reflexes • C. Present all the day
- D. Mucosal irritation causes it to increase
- E. begin at transverse colon

• Answer: C

Secretions:

Regarding gastric secretion which one of the followings is NOT true: • A. Somatostatin inhibits release of HCl

- B. Oxyntic cells are secreting intrinsic factor
- C. Gastrin increases HCl secretion via CCK-B receptors
- D. H2 blockers can reduce HCl secretion
- E. Paracrine control is achieved by the release of cholecystokinin (CCK) • Answer: E (HISTAMINE & SOMATOSTATIN, WORK IN PARACRINE PATTERN)

Which of the followings is describing the secretion of the colon: • A. Is mainly serous secretion

- B. Is mainly mucus secretion
- C. Is controlled by interstitial cells of Cajal
- D. Is controlled by CCK
- E. Is increased by sympathetic stimulation • Answer: B

Compared to the BASAL RATE of salivary secretion, by parasympathetic stimulation all the followings are increased in the final saliva EXCEPT:

- A. Amount of saliva
- B. pH of saliva
- C. K⁺ concentration
- D. Na⁺ concentration
- E. Cl⁻ concentration

• Answer: C

• Regarding bile secretion which one of the followings is NOT true:

- A. Is stored in the gall bladder between meals
- B. Its secretion is well correlated with the fat content in meal
- C. The main hormone involved in controlling secretion is cholecystokinin • D. Enterohepatic circulation is ensuring recycling of bile salts
- E. Same concentration of constituents is found in bile released from gallbladder and liver
- Answer: E (bile salt secreted diluted from liver and concentrated in gallbladder)

• All of the following increase pancreatic secretion EXCEPT: • A. Cholecystokinin

- B. Secretin
- C. Acetylcholine
- D. Vasodilation of pancreatic blood vessels • E. Pancreatic polypeptide

• Answer: E

The effects of cholecystokinin on gallbladder smooth muscle, sphincter of Oddi, and exocrine pancreas, respectively, are:

- A. Contraction, contraction, stimulation of secretion from duct cells
- B. Contraction, contraction, stimulation of secretion from acinar cells
- C. Contraction, contraction, stimulation of secretion from duct cells
- D. Contraction, relaxation, stimulation of secretion from acinar cells

• Answer: D

• Loss of G cells Decreases acid secretion mainly by which of the following mechanisms:

- A. Increased acetylcholine release • B. Reduced parietal cell inhibition • C. Decreased gastrin secretion
- D. Decreased Secretin Release
- E. Parasympathetic stimulation

• Answer: C

• Which of the following would completely eliminate the cephalic phase of gastric secretion:

- A. Histamine H2 blockers
- B. CCK-B receptor blockers
- C. Vagotomy (i.e. cutting the vagus nerve or branches of it)
- D. Sympathectomy (i.e. cutting sympathetic nerves)
- E. Atropine

• Answer: C

• Gastric HCL secretion can be decreased by stimulation of:

- A. S cells (somatostatin releasing cells)
- B. H2 receptors a-somatostatin
- C. Enterochromaffin like cells
- D. Vagus nerve
- E. G cells

• Answer: A

• true about pancreatic secretion:

- A. secretion is inhibited by pancreatic poly peptide
- B. pancreatic amylase is secreted from pancreas as inactive form
- C. optimal activity of pancreatic enzymes is at low PH
- D. enterokinase is important for activation of amylase
- E. at low rate of secretion concentration of CL-is lower than at high rate of secretion

• Answer: A

• Wrong about CCK (cholecystokinin):

- A. causes contraction of the gallbladder
- B. causes relaxation of Oddi sphincter
- C. activates pancreatic duct cells
- D. stimulates enzyme secretion from the pancreas
- E. its release is stimulated by high fat content in meal

• Answer: C (CCK works on acinar cells)

• All of the following stimulate HCl secretion EXCEPT:

- A. Gastrin
- B. Histamine
- C. Parasympathetic Stimulation
- D. Somatostatin

• Answer: D

• Pancreatic proteolytics enzymes, which is true:

- A. Secreted from acinar cells
- B. Play a role in glucose homeostasis
- C. More than one of the above

• Answer: A

• Intrinsic factor is required for: • A. Reabsorption of bile salts

- B. Digestion of fat
- C. Absorption of vitamin B12 • D. Absorption of vitamin K
- E. Absorption of Fe⁺⁺

Ans c

Regarding bile secretion, one of the following is NOT true:

- A. Bilirubin content is important for the formation of micelles • B. Is stored in the gallbladder between meals
- C. Its secretion is well correlated with the fat content in meal • D. Water and electrolyte content is stimulated by secretin
- E. Is increased by parasympathetic stimulation

• Answer: A

• One of the following concerning pancreatic secretion is True:

- A. Cl⁻ concentration is lower at low rate of secretion
- B. HCO₃⁻ secretion is increased by parasympathetic stimulation
- C. Enzymatic secretion is stimulated by secretin

-
- D. Is controlled mainly by enteric nervous system
 - E. Is increased by release of pancreatic polypeptide
 - Answer: B
 - One of the following with regard to the blood flow of the gastrointestinal tract is NOT true:
 - A. Is controlled by enteric nervous system
 - B. Increase blood flow results in increased water and electrolyte secretion
 - C. Is increased by more release of VIP
 - D. Is increased by higher sympathetic tone
 - E. Is increased after meals
 - Answer: D
 - One of the followings with regard to gastric secretions is NOT true:
 - A. Proton pump inhibitors are reducing HCl secretions
 - B. Enterochromaffin like cells are releasing intrinsic factor
 - C. Pepsinogen is released by chief cells
 - D. Is stimulated by vagus nerve
 - E. Increased activity of enteric neurons that release GRP results in activation of hormonal control
 - Answer: B
 - One of the following is NOT a function of saliva:
 - A. Keeping the mouth clean
 - B. Facilitated the absorption of carbohydrates by oral mucosa
 - C. Helps in stimulation of taste buds
 - D. Has protective action
 - E. Due to its much content, it facilitates the slippage of food bolus along the esophagus
 - Answer: B
 - Secretion of pancreatic enzymes by:
 - A. Duct cells
 - B. Endocrine portion of the pancreas
 - C. Acinar cells
 - D. Zymogen granules
 - E. duodenal mucosa
 - Answer: C

Digestion and absorption

Which of the followings is NOT true with regard to proteolytic enzymes

- A. Intracellular peptidases are responsible for final digestion of proteins
- B. Chymotrypsin is activated in duodenum by phosphorylation with enterokinase
- C. Aminopeptidase is a brush border enzyme
- D. Pepsin is endopeptidase
- E. Pancreatic proteolytic enzymes are having optimal activity at alkaline pH
- Answer: B

Concerning carbohydrates digestion which one is CORRECT:

- A. Human enzymes can attack only alpha linkages of the polymers of glucose
- B. The digestion by amylase depends on enterokinase activity
- C. Final digestion is taking place by intracellular enzymes
- D. Pancreatic enzyme involved in carbs digestion is secreted as inactive form
- E. The bulk of digestion is by salivary amylase
- Answer: A

All the followings about the digestion and absorption of fat are true EXCEPT:

- A. The digestion of fat is taking place at the shell-core interface of micelles
- B. Monoglycerides and free fatty acids are transported across luminal membrane by simple diffusion,
- C. Absorbed fat is taken away from villi by blood circulation
- D. The absorbed fat products will combine with lipoproteins to form chylomicrons
- E. Emulsification is required for increasing exposure of fat to enzymes
- Answer: C (lipids are removed by lacteals (lymphatic vessels))

One of the followings concerning the absorption of lipid-soluble vitamins is TRUE:

- A. It is taking place by active transport mechanisms
- B. Is well correlated with bilirubin content in chyme
- C. It depends on the activity of enterokinase
- D. It is decreased by conditions that induce steatorrhea

-
- E. It is increased by release of intrinsic factor

• Answer: D

Which of the following pairs are NOT related to each other: • A. Mucosal block : Absorption of Fe⁺⁺

- B. Intrinsic factor : Absorption of vitamin B12
- C. Vitamin D : Absorption by passive mechanism
- D. Chylomicrons : B-Lipoproteins
- E. Vitamin K : Expression of calbindin

• Answer: E

Choose the incorrect pair of (nutrient – mode of entry into absorptive cell): • A. Glucose – Na⁺-dependent mechanism

- B. Fructose – facilitated diffusion
- C. Bile salts – active transport
- D. Tripeptide – Na⁺-independent mechanism
- E. Monoglycerides – simple diffusion

• Answer: D

Which of the following is a similarity between calcium and iron absorption:

- A. Their absorption is increased by parathyroid hormone
- B. Their extent of absorption is enhanced by vitamins
- C. Their absorption requires binding to proteins secreted into the intestinal lumen
- D. Both are absorbed by passive mechanisms
- E. More than one of the above

• Answer: B

Digestion and absorption of which of the following is NOT impaired by pancreatic insufficiency:

- A. Triglycerides
 - B. Starch
 - C. Vitamin D
 - D. Proteins
 - E. Sucrose
- Answer: E (Sucrase : brush border enzyme)

The absorption of is not affected by blocking the activity of Na⁺/K⁺ pump at the basolateral membrane of absorptive cells

- A. galactose
- B. Dipeptides
- C. Water
- D. Cl⁻
- E. Vitamin D

• Answer: E

Which of the following is true regarding protein digestion:

- A. pepsin is acting as exopeptidase
 - B. optimal activity of pancreatic enzymes is at high PH
 - C. the final digestion process is carried out by brush border enzymes
 - D. pancreatic proteolytic enzymes are secreted from acinar cells as active enzymes
 - E. pepsinogen is activated in duodenum by enterokinase
- Answer: B (pepsinogen is activated by HCl while Trypsinogen activated by enterokinase in the duodenum)

Which of the following substances' absorption is not Sodium-dependent: • A. Glucose

- B. Fructose
 - C. Galactose
 - D. Water
- Answer: B

Which of the following substances its absorption is blocked when it's in excess amounts and absorbed only when needed:

- B. Calcium
 - C. Iron
- Answer: C

One of the followings is TRUE regarding pancreatic proteolytic enzymes:

- A. Have optimal activity at low PH
- B. Are activating brush border enzymes

- C. All of them act as endopeptidases
 - D. Are responsible for final digestion of proteins
 - E. Are secreted as inactive enzymes from the pancreas • Answer: E
- Intrinsic factor is required for: • A. Reabsorption of bile salts • B. Digestion of fat
- C. Absorption of vitamin B12 • D. Absorption of vitamin K
 - E. Absorption of Fe⁺⁺ • Answer: C

The absorption of which of the following is blocked at the mucosa by absorptive cells and transported toward interstitial fluids when needed by the body:

- A. Mg⁺⁺
 - B. Ca⁺⁺
 - C. Fe⁺⁺
 - D. Vitamin B12
 - E. Vitamin K
 - Answer: C
- the site where you have highest reabsorption of fluid is:
- A. Stomach
 - B. Duodenum
 - C. Ileum
 - D. Colon
 - Answer: C (HIGH ABSORPTION OF FLUIDS IN ILEUM WHILE HUGH ABSORPTION OF FOOD IN DUODENUM)

One of the following is released in blood according to demand, and it is stored in epithelial cells before the release:

- A. Fe⁺²
- B. Cat²
- C. Glucose
- D. Galactose • E. Proteins
- Answer: A

One of the followings concerning protein digestion and/or absorption is TRUE:

- A. Pepsinogen is more active by the high pH in duodenum
- B. After digestion, proteins can be absorbed as trimmers
- C. The bulk of digestion is in the stomach
- D. The final digestion process is carried out in ileum by brush border enzymes
- E. After digestion, all amino acids are absorbed actively
- Answer: B

Which of the following is WRONG:

- A. Carboxypeptidases is an exopeptidases
- B. beta-glycosidase is present in human secretion
- C. iron is transported in the ferrous form rather than the ferric form • D. The final saliva is a hypotonic solution
- E. In intestine, bilirubin is transformed into urobilinogen
- Answer: B

The final digestion of protein is taking place in (at): • A. Stomach

- B. Lumen of duodenum
- C. Brush border of jejunum mucosa
- D. Inside absorptive cells
- E. Lumen of ileum
- Answer: D

All of the following are true regarding lipid digestion and absorption except: • A. Pancreas secretes enzymes and coenzymes for lipid digestion

- B. Bile slats are important for micelle formation
- C. Micelle formation helps lipids absorption
- D. The digestion products of triglycerides (monoglycerides) are transported inside the absorptive cells by Na⁺ dependent secondary transport
- E. Chylomicrons are formed inside the enterocytes and takes away from the villas by lacteals

- Answer: D
- Wrong about lipids:
 - A. Bile is used to solubilize lipid
 - B. Digestion on brush border
 - C. most of its digestion appears in the intestine
 - D. Absorbed by simple diffusion
 - E. Reform triglycerides inside epithelial cells in the intestine • Answer: B

Right about proteins:

- A. continue the last part of digestion inside the enterocytes
- B. Absorbed as mono-amino acids only
- C. Their digestion starts in the mouth by the action of amylase • D. Proline is absorbed by Na⁺ independent carriers
- E. Most of its digestion takes place in the stomach

• Answer: A

Metabolism

- One of the followings with regard to starvation is NOT TRUE: • A. First depletion is for carbohydrate stores.
- B. Protein depletion is high in the final stage of starvation
- C. High rate of fat depletion is during weeks 2-6
- D. Lowest respiratory quotient will be between weeks 3 and 6
- E. The metabolic rate is higher than before starting starvation
- Answer: E
- In healthy person, the increase of feeding behaviors is well correlated with the increase in:
 - A. Leptin level in blood
 - B. Cholecystokinin (CCK) release
 - C. GIP (Glucose dependent Insulinotropic Polypeptide) release • D. Activity of thermoregulatory centers in hypothalamus
 - E. Expression of OB gene

Ans D

Which of the following pairs are NOT related to each other: • A. Inanition: High release of normal leptin

- B. Insulin release: Inhibition of feeding behaviors
- C. Leptin expression: OB gene
- D. Obesity: Childhood over nutrition
- E. Adipocytes: Secretion of leptin
- Answer: A (INANITION may occurs by : 1- inadequate availability of food
- 2- psychogenic or hypothalamic abnormalities
- Which of the following pairs are NOT related to each other: • A. Adipocytes : Secretion of leptin
- B. Insulin release : Inhibition of feeding behaviors
- C. High release of leptin : Starvation
- D. leptin expression : OB gene
- E. Obesity: Childhood over nutrition

• Answer: C

• One of the followings with regard to the metabolic rate is NOT true:

- A. It represents the heat produced by a body per meter square surface area per hour
- B. It is increased during sympathetic stimulation
- C. To measure the BMR the tested person must be in sleep during measurement
- D. It reflects the metabolic activities that are taking place in the body per time unit
- E. O₂ consumption is used for indirect calorimetric measurements of metabolic rate

• Answer: C

• True about Leptin:

- A. is secreted by endocrine cells along the GI
- B. gene defect that produces nonfunctional leptin hormone can induce obesity
- C. it acts on hypothalamus centers to increase food intake

-
- D. its concentration in blood is high in thin people
 - E. low fat store in body in stimulatory factor for its secretion
 - Answer: B
 - Respiratory quotient (RQ) of a body would be the lowest:
 - A. When glucose is used as primary fuel for cellular energy
 - B. In vegetarians
 - C. When mixed food is used as a source of energy
 - D. In the 3rd week of starvation
 - E. In persons with high protein diet
 - Answer: D
 - All of the following may induce obesity EXCEPT:
 - A. Defect in OB gene
 - B. Over-nutrition during childhood
 - C. Overproduction of normal leptin by adipocytes
 - D. Neurogenic abnormalities of feeding or satiety centers
 - E. In hypothyroidism
 - Answer: C
 - One of the following with regard to the metabolic rate is NOT true:
 - A. It is increased by sympathetic stimulation
 - B. It represents the heat produced by a body per meter² surface area per hour
 - C. It reflects the metabolic activities that are taking place in the body per time unit
 - D. O₂ consumption is used for indirect calorimetric measurements of metabolic rate
 - E. It is decreased in persons on a protein diet
 - Answer: E
 - Which of the following pairs are NOT related to each other:
 - A. Endocrine cells: Secretion of leptin
 - B. Insulin release: Inhibition of feeding behaviors
 - C. Starvation: low (RQ)
 - D. leptin expression: OB gene
 - E. Obesity: Childhood over nutrition

Ans A

Feeding behaviors can be inhibited in all the following conditions EXCEPT: • A. Increased leptin level in blood

- B. Increased metabolic rate in the body
- C. Increased Insulin level
- D. Defect in OB gene
- E. Increased fat deposits • Answer: D & B
- Wrong about leptin:
 - A. is important in long term regulation of the body weight.
 - B. Produced when there is high storage of fat in adipose cells • C. acts on specific receptors in the hypothalamic centers
 - D. activates feeding centers
 - E. secreted by adipose cells
- Answer: D
- Which of the following produce the highest metabolic rate:
 - A. sleep
 - B. hypothyroidism
 - C. basal state
 - D. fever
 - E. Malnutrition
- Answer: D
- Which cause stimulation in the feeding centres: • A. Increased metabolic rate
- B. Increased leptin hormone
- C. Low glucose level

-
- D. Distension of stomach and duodenum • E. More than one of the above
 - Answer: E (A&C are correct)
 - One of the followings is true during starvation:
 - A. The last depletion is for carbohydrate deposits
 - B. The body is in a positive balance
 - C. Their metabolic rate is higher than before starting starvation
 - D. The first depletion of body nutrient stores is for fat
 - E. The rate of protein depletion between weeks 1-6 is slower than for fat • Answer: E

Anatomy:

Inguinal

An injury to the ilio-inguinal nerve , might be associated with one of these types of hernia :

- a. direct hernia
- b. indirect hernia
- c. lumbar hernia
- d. internal hernia
- e. incisional hernia

Answer: a

- Wrong about indirect hernia

- a. sac from superficial inguinal ring will be below and lateral to pubic tubercle
- b. It is 20 times more common in young males than females

Answer: a

Indirect->downwards and medially

Wrong about spermatic cord

- a. inner spermatic fascia is form internal oblique
- b. External Spermatic fascia is derived from the external oblique aponeurosis

Answer: a

Stab to right inguinal region injuring what nerve that will cause loss of sensation in the inguinal region

- a. T10
- b. first lumbar nerve
- c. 3rd lumbar nerve

Answer: b

- Wrong about direct hernia:

- a. bulges from superficial inguinal ring
- b. medial to inferior epigastric artery

Answer: a

- What is the type of hernia that exits form this triangle (inguinal triangle)

- a. indirect inguinal hernia

-
- b. direct inguinal hernia
 - c. hiatal hernia

Answer: b

- All of the following concerning the direct inguinal hernia are true except:

- a. the hernia sac lies lateral to inferior epigastric artery
- b. usually bilateral

Answer: a

Direct inguinal hernia, all correct except:

- a. hernial sac lies medial to the inferior epigastric artery
- b. common in the old
- c. usually bilateral
- d. the hernial sac never reaches the scrotum
- e. in superficial inguinal ring test, you feel impulse on the tip of your index

Answer: e

During surgery for the inguinal hernia in a 24 years Old male patient, choose the wrong statement.

- a. division of the ilioinguinal nerve will cause direct inguinal hernia
- b. division of the genital branch of the genitofemoral nerve will cause loss of cremasteric reflex
- c. the artery to vas deferens is part of the spermatic cord
- d. in indirect hernia, the deep inguinal ring is reinforced by conjoint tendon
- e. to get access to the canal, the external oblique aponeurosis should be divided

Answer: d

About indirect inguinal hernia , which is wrong :

- a. Commonly unilateral
- b. Common in young
- c. Hernial sac is found lateral to inferior epigastric artery
- d. Caused by injury to ilioinguinal nerve

Answer: d

All the following statement concerning the indirect inguinal hernia are correct EXCEPT:

- A. Injury to the ilioinguinal nerve may cause the hernia
 - B. The deep ring lies lateral to inferior epigastric vessels
 - C. The hernia may reach the scrotum
 - D. Usually it is unilateral in adults
 - E. The hernia! sac lies above and medial to pubic tubercle
- Answer: A

Concerning the spermatic cord, all the following statements are correct EXCEPT:

- A. The pampiniform plexus of veins which causes varicocele is more common on left side.
- B. Covered by three spermatic fascia
- C. The testicular vein formed at superficial inguinal ring

-
- D. Contains the genital branch of genitofemoral nerve which innervates the cremasteric muscle.
 - E. Contains three types of nerves
 - Answer: C

Which of the following statements is false:

- A. The contents of direct inguinal hernias nearly always reach the scrotum
- B. The neck of the indirect inguinal hernia lies laterally to the inferior epigastric artery
- C. To reduce the direct inguinal hernia, we press the bulge backwards.
- D. The neck of the direct inguinal hernia is larger than the neck of the indirect inguinal hernia
- E. Direct inguinal hernia is common in elderly who have weak abdominal muscles
- Answer: A

All the following statement concerning the direct inguinal hernia are correct EXCEPT:

- A. One of the causes of the hernia is Injury to the iliohypogastric nerve
- B. Usually it is bilateral in adults
- C. It lies medial to inferior epigastric vessels
- D. The hernia sac never passes through the superficial inguinal ring
- E. Common in old age
- Answer: D

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Head and neck

Patient who lost taste from the anterior part of his tongue

- a. loss in facial nerve
- b. loss in hypoglossal nerve
- c. loss in oculomotor nerve

Answer: a

A patient who may have lost facial nerve in injury, the wrong test is

- a. ask him to show his teeth
- b. ask him to close his eyes
- c. ask him to clench his teeth

Answer: c

Not in the parotid bed

- a. medial pterygoid
- b. sternocleidomastoid
- c. ramus of mandible

Answer: a

- Which one of the following nerves is sensory and secretomotor to the parotid gland:

- a. Lesser petrosal nerve.
- b. Glossopharyngeal nerve.
- c. Facial nerve.
- d. Greater petrosal nerve.
- e. Auriculotemporal nerve.

f. Answer: e

What nerve transmits presynaptic fibers to this ganglion (submandibular)

- a. oculomotor
- b. hypoglossal
- c. facial
- d. vagus

Answer: c

- Not medial to sublingual gland

- a. lingual nerve
- b. stylohyoid muscle
- c. submandibular duct

Answer: b

All origins to external muscles of tongue except

- a. pterygoid process
- b. styloid process

Answer: a

- Which of the following muscles is diagnostic of right hypoglossal nerve injury

- a. intrinsic muscles of the tongue
- b. genioglossus
- c. palatoglossus
- d. Styloglossus
- e. hyoglossus

Answer: b

- Between the hyoglossus and mylohyoid, all correct except

- a. submandibular ganglia
- b. submandibular duct
- c. hypoglossal nerve
- d. deep part of submandibular gland
- e. lingual artery

Answer: e

- Mark the wrong statement regarding the Mouth and Salivary Glands

- a. general sensation from anterior 2/3 of the tongue carried via lingual nerve
- b. posterior third of the tongue drain its lymph in part to jugulodigastric lymph nodes
- c. Palatoglossal arch contains a muscle supplied by the hypoglossal nerve
- d. parotid gland divided into two parts by the facial nerve
- e. submandibular duct courses between mylohyoid and hyoglossus muscles

Answer: c cranial branch of accessory and vagus

On examination of the middle ear by doctor there is severe infection damaging the tympanic nerve, which is the secretomotor to the parotid gland, the tympanic nerve is:

- A. Forms tympanic plexus in the external auditory meatus
- B. Synapses with fibers in the lesser petrosal nerve
- C. Branch of Glossopharyngeal nerve
- D. Branch of Facial nerve
- E. Contains postganglionic parasympathetic fibers
- Answer: C

All of the following statements are true, EXCEPT:

- A. The base of the parotid gland is superficial, while its apex is deep
- B. The submandibular gland's duct opens opposite the lower second molar tooth
- C. The facial nerve runs superficially in the substance of the parotid gland
- D. Chorda tympani carries preganglionic parasympathetic fibers for the submandibular and sublingual glands
- E. The lingual nerve first runs lateral to the submandibular duct then inferior then medial to it
- Answer: B

One of the following structures is not lie between the mylohyoid and hyoglossus muscles:

- A. Submandibular duct
- B. Submandibular ganglion
- C. Submandibular gland superficial part
- D. Hypoglossal nerve
- E. Lingual nerve
- Answer: C

All the following muscles are supplied by the hypoglossal nerve, EXCEPT:

- A. Genioglossus muscle
- B. Hyoglossus muscle
- C. Styloglossus muscle
- D. Palatoglossal muscle
- E. More than one answer
- Answer: D

All of the following statements are false regarding the MOUTH, EXCEPT:

- A. The vermillion (transitional) zone is different from the mucosa, as it has hair follicles and sebaceous glands
- B. The philtrum is formed by the meeting of the two mandibular prominences
- C. The vestibule of the mouth has no direct communication with the mouth proper when the teeth are closed
- D. The glossopharyngeal nerve doesn't carry sensation from the mouth proper
- E. The substance of the lips is formed by a circular smooth muscle
- Answer: D

-
- 1- Patient who lost taste from the anterior part of his tongue
- loss in facial nerve
 - loss in hypoglossal nerve
 - loss in oculomotor nerve
- 2- Wrong about palatine tonsils
- The tonsil is covered on its lateral surface by a fibrous capsule
 - sensory from vagus nerve
- 3- All origins to external muscles of tongue except
- pterygoid process
 - styloid process
- 4- Which of the following muscles is diagnostic of right hypoglossal nerve injury
- intrinsic muscles of the tongue
 - genioglossus
 - palatoglossus
 - Styloglossus
 - hyoglossus
- 5- Mark the wrong statement regarding the Mouth and Salivary Glands
- general sensation from anterior 2/3 of the tongue carried via lingual nerve
 - posterior third of the tongue drain its lymph in part to jugulodigastric lymph nodes
 - Palatoglossal arch contains a muscle supplied by the hypoglossal nerve
 - parotid gland divided into two parts by the facial nerve
 - submandibular duct courses between mylohyoid and hyoglossus muscles
- 6- Not medial to sublingual gland
- lingual nerve
 - stylohyoid muscle
 - submandibular duct
- 7- What is medial to the hyoglossus muscle
- lingual artery
 - lingual nerve
 - submandibular duct
- 8- What is medial to the hyoglossus muscle
- lingual artery
 - lingual nerve
 - submandibular duct
 - submandibular ganglion
- 9- All pertaining to the parotid duct is true except:
- one finger breadth above the zygomatic arch
 - Opens in the oral cavity at the level of the upper second molar teeth
 - crosses over the masseter and pierces the buccinator muscle

10- Between the hyoglossus and mylohyoid, all correct except

- a. submandibular ganglia
- b. submandibular duct
- c. hypoglossal nerve
- d. deep part of submandibular gland
- e. lingual artery

11- A patient who may have lost facial nerve in injury, the wrong test is

- a. ask him to show his teeth
- b. ask him to close his eyes
- c. ask him to clench his teeth

12- All of the following are related to palatine tonsil except:

- a. Fibrous capsule
- b. Internal jugular vein
- c. Superior constrictor muscle of the pharynx
- d. Tonsillar artery
- e. External palatine vein

13- Wrong about secretomotor innervation of parotid gland?

- a. Pain Sensation through fascial nerve
- b. Nerve supply via otic ganglia

14- What nerve transmits presynaptic fibers to this ganglion (submandibular)

- a. oculomotor
- b. hypoglossal
- c. facial
- d. vagus

15- Which one of the following nerves is sensory and secretomotor to the parotid gland:

- a. Lesser petrosal nerve
- b. Glossopharyngeal nerve.
- c. Facial nerve.
- d. Greater petrosal nerve.
- e. Auriculotemporal nerve.

16- One of the following muscles is forming the palatine aponeurosis:

- a. Levator veli palatini muscle.
- b. Tensor veli palatini muscle.
- c. Musculus uvula.
- d. Palato-pharyngeus.
- e. Glosso-pharyngeus.

17- Not in the parotid bed

- a. medial pterygoid
- b. sternocleidomastoid
- c. ramus of mandible

18- Which one of the following blood vessels usually causes post operative bleeding after tonsillectomy:

- a. External palatine vein.
- b. Tonsillar branch of facial artery.
- c. Tonsillar branch of lingual artery.
- d. Tonsillar vein.
- e. Pharyngeal plexus of vein.

1- a 6- b 11- c 16- b
2- b 7- a 12- b 17- a
3- a 8- a 13- a 18- a
4- b 9- a 14- c
5- c 10- e 15- e

-
- 1- The palatine tonsil all the following statements are correct EXCEPT:
- It lies in the tonsillar sinus between two folds of mucosa
 - Has sensory innervation from the lesser palatine nerve
 - Has lymphatic drainage to the jugulodigastric lymph nodes
 - The source of bleeding after tonsillectomy is usually the arterial blood supply
 - Receives blood supply from the facial artery

2-Wrong about pharynx

- all muscles are innervated by pharyngeal plexus except stylopharyngeus that receives it from the vagus nerve
- The pharyngeal recess is a depression in the pharyngeal wall behind the tubal elevation

3- About swallowing, all true except

- composed of voluntary and involuntary phases.
- primary peristalsis is initiated at the pharynx
- secondary peristalsis is initiated in the esophagus by remnant of food in the esophagus.
- preceded by relaxation wave to open the lower esophageal sphincter.
- closure of epiglottis is voluntary

4-Which one of the following structures is found between the superior and middle constrictor muscles of the pharynx?

- stylopharyngeus muscle
- internal laryngeal muscle

5-All of the following innervate the pharynx except

- external laryngeal
- internal laryngeal
- glossopharyngeal nerve

6-About innervation of the pharynx, choose the wrong statement

- Sensory innervation to the oropharynx is by vagus nerve
- Sensory innervation to the laryngopharynx is by nerve that passes between middle and inferior constrictor muscle
- All the muscles innervated by pharyngeal plexus except one
- The stylopharyngeus is innervated by the glossopharyngeal nerve
- Sensory innervation to the nasopharynx is by maxillary nerve

7-All of the following are related to palatine tonsil except:

- a. Fibrous capsule
- b. Internal jugular vein
- c. Superior constrictor muscle of the pharynx
- d. Tonsillar artery
- e. External palatine vein

8-Select the wrong statement concerning the Pharynx and Esophagus

- a. pharynx extends from base of skull to lower border of cricoid cartilage
- b. pharynx supplied mainly by the ascending pharyngeal artery
- c. abdominal esophagus drains its venous blood into inferior vena cava
- d. thoracic esophagus pass through superior and posterior mediastinum
- e. piriform fossa in oropharynx is the common site of foreign body impaction

9- An injury to the ilio-inguinal nerve , might be associated with one of these types of hernia :

- a. direct hernia
- b. indirect hernia
- c. lumbar hernia
- d. internal hernia
- e. incisional hernia

10- Wrong about indirect hernia

- a. sac from superficial inguinal ring will be below and lateral to pubic tubercle
- b. It is 20 times more common in young males than females

11- Wrong about spermatic cord

- a. inner spermatic fascia is form internal oblique
- b. External Spermatic fascia is derived from the external oblique aponeurosis

12- Wrong about direct hernia:

- a. bulges from superficial inguinal ring
- b. medial to inferior epigastric artery

13- What is the type of hernia that exits form this triangle (inguinal triangle)

- a. indirect inguinal hernia
- b. direct inguinal hernia
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17- About indirect inguinal hernia , which is wrong :

- a. Commonly unilateral
- b. Common in young
- c. Hernial sac is found lateral to inferior epigastric artery
- d. Caused by injury to ilioinguinal nerve

18- Which match is wrong regarding the anterior abdominal wall?

- a- internal spermatic fascia from fascia transversalis
- b- indirect inguinal hernia located medial to inferior epigastric vessels

-
1. D
 2. A
 3. E
 4. A
 5. A
 6. A
 7. B
 8. E
 9. A
 10. A
 11. A
 12. A
 13. B
 14. A
 15. E
 16. D
 17. D
 18. B

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