

# Answers

## CHAPTER 32 GASTROINTESTINAL, HEPATOBIILIARY, AND PANCREATIC SYSTEMS FUNCTION, DATA COLLECTION, AND THERAPEUTIC MEASURES

### AUDIO CASE STUDY

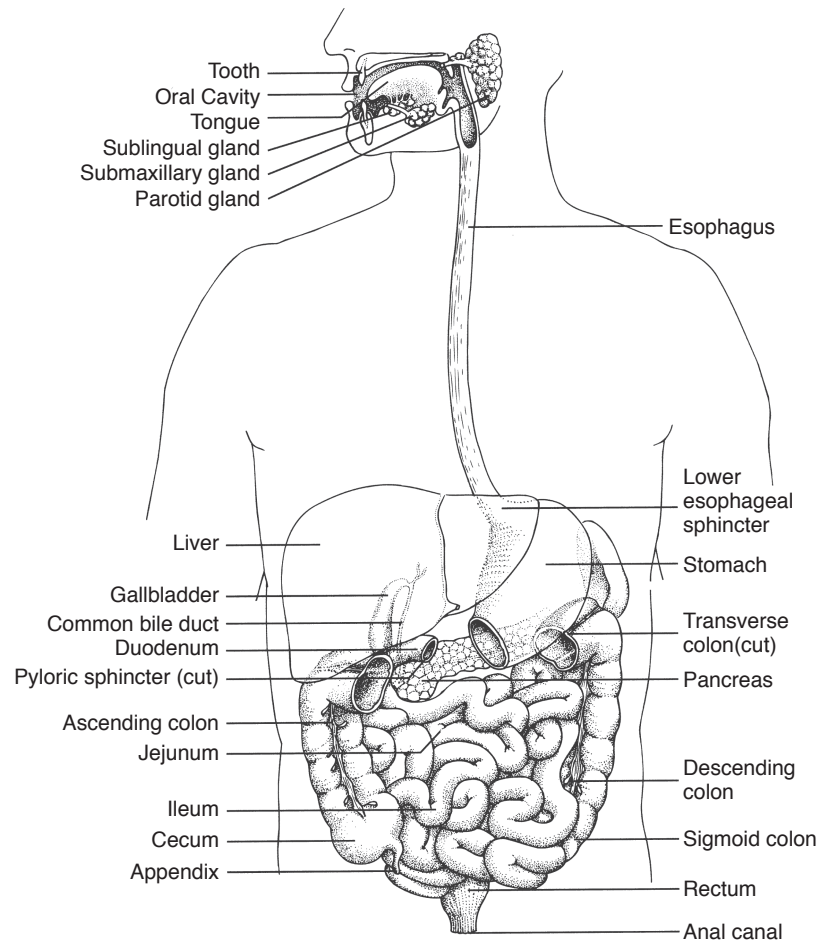
#### Grace and Enteral Feedings

1. Collects data on abdominal status—nausea or a full feeling, soft, flat, not distended. Changes and labels enteral tube-feeding administration set every 24 hours, practices appropriate hand hygiene, avoids contamination of feeding tube and feeding formula.
2. Measured length of tube and compared it to insertion measurement verified with x-ray.
3. Head of Mrs. Patel's bed was elevated to 30 degrees to prevent aspiration.
4. Head of bed is elevated to 30 to 45 degrees to prevent aspiration, appropriate patient hand hygiene practiced, and oral care administered four times daily to remove bacteria.

### FUNCTIONS OF THE GASTROINTESTINAL SYSTEM

1. esophageal
2. ileocecal
3. pyloric
4. small
5. stomach
6. large
7. small
8. esophagus
9. external
10. salivary
11. teeth, tongue
12. villi
13. rectum
14. bile

## STRUCTURES OF THE GASTROINTESTINAL SYSTEM



## VOCABULARY

Sample sentences will vary for the Vocabulary problems.

1. endoscope
2. bowel sounds
3. colonoscopy
4. gavage
5. impaction
6. occult
7. fluoroscope
8. steatorrhea
9. jaundice
10. gastroscopy

## LABORATORY TESTS

1. (5)
2. (4)
3. (2)
4. (1)
5. (3)

## BOWEL PREPARATION

Corrections are in **boldface**.

A **bowel** preparation is required for several procedures that visualize the lower bowel. This preparation is important for effective test results. An incomplete bowel preparation may prevent the test from being done or cause the need for it to be repeated. This can result in the patient's **delayed** discharge and **increased costs**. The patient usually receives a **clear liquid** diet 24 hours before the test. A laxative may be given. Enemas may be given **the evening before and in the morning**. **Older** or debilitated patients should be carefully monitored during the administration of multiple enemas, which can fatigue the patient and **decrease** electrolytes. In patients with bleeding or **severe diarrhea**, the bowel preparation may not be ordered by the health-care provider.

**PANCREAS**

1. Trypsin
2. Lipase
3. Amylase

**LIVER**

1. clay
2. clotting
3. radioactive
4. 2
5. bleeding

**CRITICAL THINKING AND CLINICAL JUDGMENT**

1. Flush the tube at intervals and before and after administration of medications. Use 30 mL of water every 4 hours to routinely flush the tube. Sterile water may be desired, especially for immunocompromised people, to prevent infection from potentially contaminated tap water. Flushing the tube is done to prevent clogging, and it also provides free water, which counts toward the patient's daily total free water needs.
2. Head of bed up 30 to 45 degrees to prevent aspiration.
3. By comparing current exposed tube length with documented exposed tube length at insertion.
4. Label feeding. Ensure correct tube connection is made. Follow tubes back to their site of origin before making a connection to accurately identify the purpose of the tube. Use or advocate for use of ENFit connection tubing to help prevent tubing misconnections to prevent patient injury or death.
5. To carefully control rate of the feeding and help ensure patient's nutritional needs are met.
6. Provide patient's free water needs. Consult dietitian and HCP.
7. **C:** I am concerned about Mrs. Davis's blood sugar levels. She has a history of esophageal cancer and has type 2 diabetes. She was started on her enteral tube feeding yesterday. Currently, her blood sugar is 238 mg/dL.  
**U:** I am uncomfortable with her elevated blood sugar.  
**S:** I believe she is not safe and is experiencing hyperglycemia.

**REVIEW QUESTIONS**

*The correct answers are in **boldface**.*

1. **(1, 3, 4, 5)** are correct. After a barium enema, the stools will be white in color for a day or two. The patient is encouraged to drink fluids and may need a laxative to pass the barium. **(2)** The nurse does not need to notify the

- HCP since this is a normal finding to have white-colored stools after a barium enema. The HCP would be notified if the patient could not pass the barium in the stool.
2. **(2)** is correct. The gag reflex must return before the patient eats or drinks to prevent aspiration. **(1)** Keeping the patient nil per os (NPO) does not rest the vocal cords. **(3)** There is no reason to keep the throat dry after an esophagogastroduodenoscopy. **(4)** An absent gag reflex does not stimulate vomiting.
  3. **(3)** is correct. A chest x-ray shows correct nasogastric tube placement and should always be done after initial nasogastric tube placement to verify placement is not in the lung. This should be reviewed prior to starting any feeding or medications in the tube. **(1)** Auscultation of bowel sounds does not confirm tube placement. **(2)** Nothing should be instilled into the tube prior to verifying tube placement with a chest x-ray. **(4)** A chest x-ray, not an abdominal x-ray, shows correct nasogastric tube placement. The tube placement can be verified that it is in the stomach and not the lungs.
  4. **(1, 3, 5, 6)** all require either clear visibility or they have a risk of aspiration. **(2)** A flat plate x-ray can be done with food in the stomach or feces in the bowel, which does not impair visibility of the structures and has no risk for aspiration. **(4)** It does not require being NPO. Specialized MRI scans may require the patient to be NPO.
  5. **(1, 2, 3, 6)** help ensure safe tubing connections for enteral feedings. **(4)** Only staff familiar with the patient should reconnect a disconnected tube to prevent misconnection. **(5)** Route tubes/catheters with different purposes in standardized directions (intravenous lines routed toward patient's head; enteric lines routed toward feet).
  6. **(1, 2, 5)** are correct. Normal aging causes decreased gastric motility leading to constipation. The nurse should ask about constipation such as abdominal fullness, use of laxatives, and normal bowel pattern. **(3, 4)** Antibiotics and diarrhea could indicate a gastrointestinal problem but do not indicate constipation, which can occur with normal aging.
  7. **(3)** is correct. The nurse should lightly depress the abdomen 0.5 to 1 inch. **(1, 2, 4)** The HCP performs deep palpation. Light palpation can be completed by the nurse. The abdomen should be palpated in an organized manner with the finger pads.
  8. **(1, 2, 3, 4, 5)** are correct. A nasogastric sump tube has an air vent and is used for decompression, irrigation, lavage, feeding, and medication administration. **(6)** Parenteral nutrition is not given via enteral route.
  9. **(1, 4, 5, 6)** are correct. The nurse asks the patient about recent antibiotic use, which could cause diarrhea. The nurse gathers data about the stool, including color, consistency, frequency, odor, and amount. **(2, 3)** Body piercings and bruising do not lead to diarrhea.

10. (2) is correct. The patient is reporting signs of hypoglycemia and the nurse should check the fingerstick blood sugar. (1, 3, 4) The HCP can be notified after you gather data to report, including blood sugar level and vital signs. You should not leave the patient until you determine the blood sugar level and ensure the patient is safe.

11. The area where the nurse would measure ascites.

