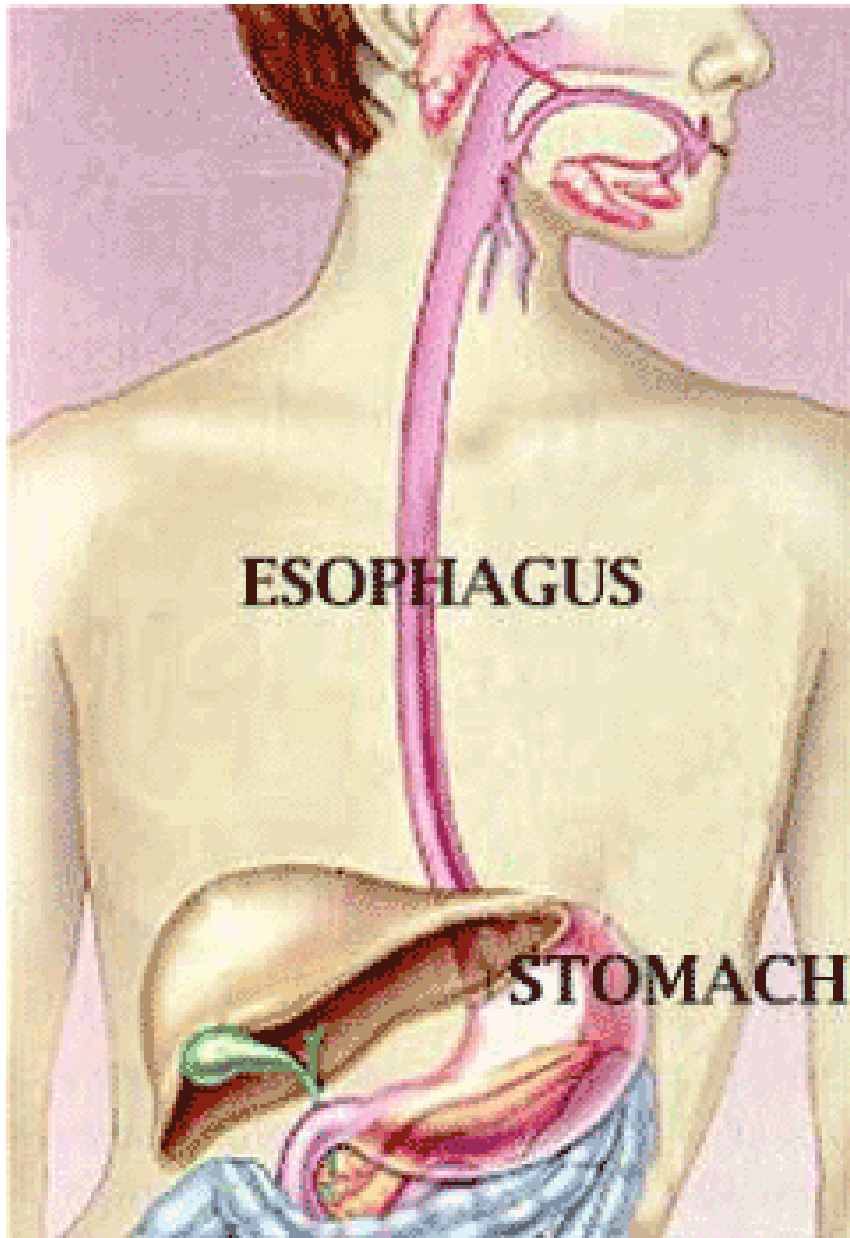


Chapter 17 :Nutrition for Patients with Upper Gastrointestinal Disorders



Upper GI tract

Upper GI

Problems with the upper GI tract impact nutrition mostly by **affecting food intake and tolerance to particular food**

DISORDERS THAT AFFECT EATING

- **Anorexia**
- **Nausea and Vomiting**

Anorexia

Anorexia : lack of appetite

- It differs from anorexia nervosa (a psychological condition characterized by **denial of appetite**).

Anorexia

- The aim of nutrition therapy is to **stimulate the appetite** to maintain adequate nutritional intake.

Anorexia :Intervention

- Serve food **attractively and season** according to individual taste
 - enhance flavors with (e.g., orange juice, vinegar, lemon juice) or strong seasonings (e.g., basil, oregano, rosemary, mint)
- Provide small, frequent **meals**.
- **Withhold beverages for** 30 minutes before and after meals to avoid displacing the intake of more nutrient-dense foods
- **Limit fat intake** if fat is contributing to early satiety.

Nausea and Vomiting

- **Might be related to :**
 - decrease in gastric acid secretion
 - decrease in digestive enzyme activity
 - decrease in gastrointestinal motility
 - gastric irritation
 - acidosis
- **Other causes include:**
 - bacterial and viral infection
 - increased intracranial pressure
 - equilibrium imbalance
 - liver, pancreatic, and gallbladder disorders
 - pyloric or intestinal obstruction.

Nutrition intervention

- The **short term** concern of nausea and vomiting is **fluid and electrolyte balance**.
- to meet patient needs until an oral intake resumes.
- With prolonged or **intractable vomiting**, dehydration and weight loss are concerns.

Nausea

- Food is withheld until nausea subsides.
- When the patient is ready to eat, clear liquids are offered and progressed to a regular diet as tolerated.
- Small, frequent meals of **low fat, readily digested carbohydrates**

Nausea

- Encourage the patient to eat slowly and not to eat if he or she feels nauseated.
- Promote good oral hygiene with mouthwash and ice chips.
- Limit liquids with meals because they can cause a full, bloated feeling.
- Encourage a liberal fluid intake between meals with whatever liquids the patient can tolerate, such as clear soup, juice, gelatin
- Serve foods at room temperature or chilled; hot foods may contribute to nausea.
- Avoid high-fat and spicy foods if they contribute to nausea

DISORDERS OF THE ESOPHAGUS

- **Dysphagia**
- **Gastroesophageal Reflux Disease (GERD)**

Dysphagia

- Mechanical causes include :
 - obstruction, inflammation, edema, and surgery of the throat.
- Neurologic causes include :
 - cerebrovascular accident, traumatic brain injury, Parkinson's disease, and multiple sclerosis.
- Refer patients with actual or potential swallowing impairments to the **speech pathology department** for a thorough swallowing assessment.

Dysphagia: Nutrition Therapy

- Modify the **texture of foods** and/or **viscosity of liquids** to enable the patient to achieve adequate nutrition and hydration while decreasing the risk of aspiration.

Dysphagia: Nutrition Therapy

- Solid foods may be
 - minced, mashed, ground, or pureed
- Thin liquids may be thickened to facilitate swallowing
- These measures often dilute the nutritional value of the diet and make food and beverages less appealing
- Enteral nutrition is important!!

National Dysphagia Diet

- Generally, moist, semisolid foods are easiest to swallow, such as pudding, custards, scrambled eggs, and yogurt because they form a cohesive bolus that is more easily controlled.
- Dry, crumbly, and sticky foods are avoided.

National Dysphagia Diet

- Some foods, such as **bread**, are **slurried** to create a texture
- easily swallowed while retaining the appearance of “regular” bread.

must have the consistency of puree when mashed with a spoon





pureed and molded foods



National Dysphagia Diet

- National Dysphagia Diet is composed of :
 - Three levels of solid textures
 - Four liquid consistencies

National dysphagia diet

Table 17.2

- Level 1: Dysphagia Pureed
- Level 2: Dysphagia Mechanically Altered
- Level 3: Dysphagia Advanced

National dysphagia diet

Table 17.2

- **Four Liquid Consistencies**
 - Thin
 - Nectarlike
 - Honeylike
 - Spoon-thick

Three Levels of Solid Textures

Level 1: Dysphagia Pureed	Foods are totally pureed to a smooth, homogenous consistency. Eliminates sticky foods such as peanut butter and coarse-textured foods such as nuts and raw fruits and vegetables	Smooth cooked cereals; slurried or pureed bread products; milk; smooth desserts such as yogurt, pudding, custard, and applesauce; pureed fruits, vegetables, meats, scrambled eggs, and soups
Level 2: Dysphagia Mechanically Altered	Soft-textured, moist foods that are easily chewed. Eliminates coarse textures, nuts, and raw fruits and vegetables (except banana)	Cooked cereals may have a little texture; some well-moistened ready-to-eat cereals; well-moistened pancakes with syrup; slurried bread; moist well-cooked potatoes, noodles, and dumplings; soft poached or scrambled egg; soft canned or cooked fruit; soft, well-cooked vegetables with <math>< \frac{1}{2}</math> in. pieces (except no corn, peas, and other fibrous vegetables). Moist-ground or minced tender meat in pieces no larger than $\frac{1}{4}$ in., soft casseroles, cottage cheese, tofu; moist cobblers and moist soft cookies; soups with easy to chew meat or vegetables
Level 3: Dysphagia Advanced	Near-normal textured foods; excludes crunchy, sticky, or very hard foods. Food is bite-sized and moist	All breads are allowed except for those that are crusty; moist cereals; most desserts except those with nuts, seeds, coconut, pineapple, or dried fruit; soft, peeled fruit without seeds; moist tender meats or casseroles with small pieces of meat; moist potatoes, rice, and stuffing; all soups except those with chewy meats or vegetables; most cooked, tender vegetables, except corn; shredded lettuce. No nuts, seeds, coconut, and chewy candy

Four Liquid Consistencies

Thin	All unthickened beverages and supplements	Clear juices, frozen yogurt, ice cream, milk, water, coffee, tea, soda, broth, plain gelatin, liquidy fruits such as watermelon
Nectarlike	Liquids thicker than water but thin enough to sip through a straw	Nectars, vegetable juices, chocolate milk, buttermilk, thin milkshakes, cream soups, other properly thickened beverages
Honeylike	Liquids that can be eaten with a spoon but do not hold their shape	Honey, tomato sauce, yogurt
Spoon-thick	Liquids thickened to pudding consistency that need to be eaten with a spoon	Pudding, custard, hot cereal

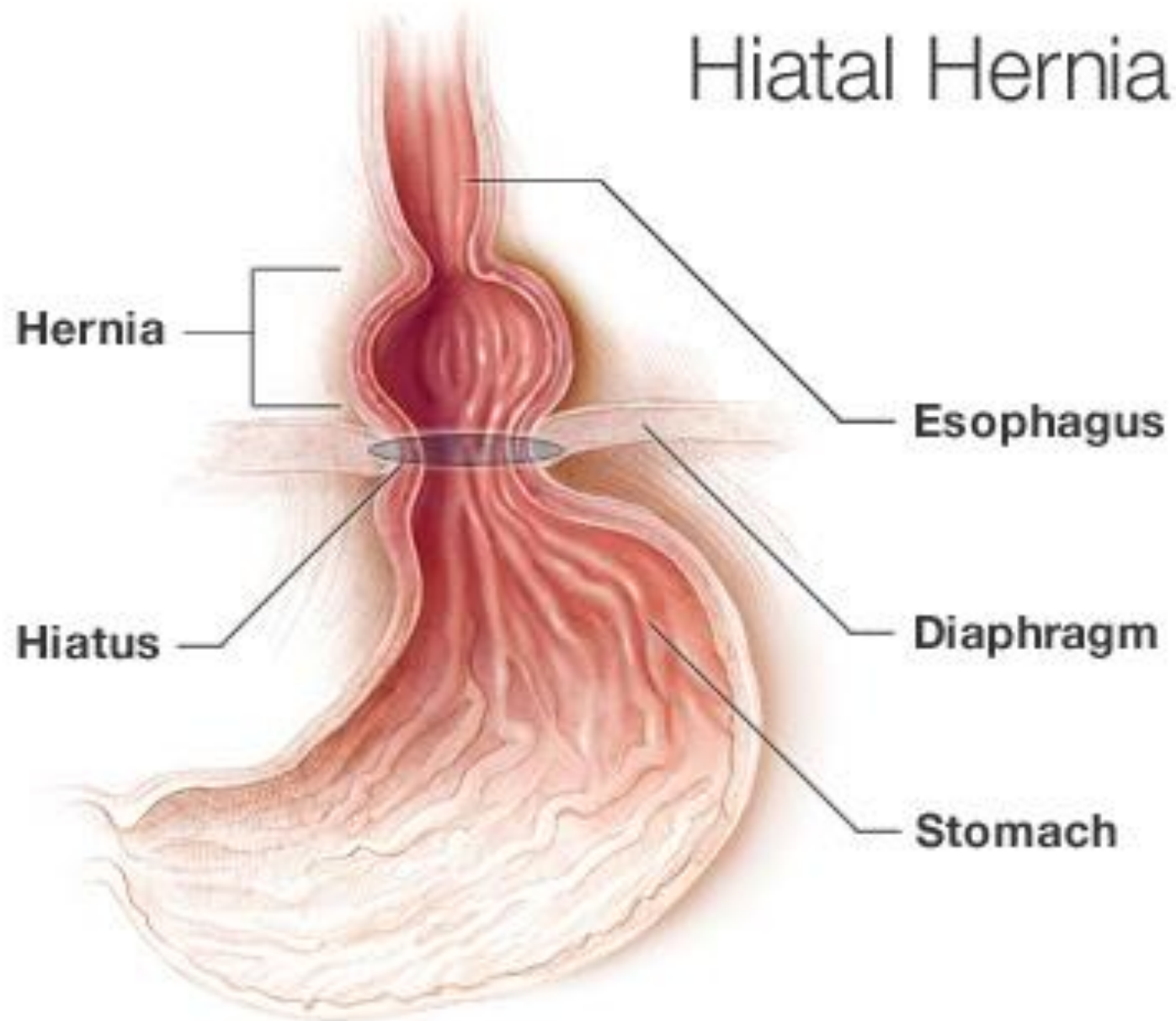
Gastroesophageal Reflux Disease

- **Gastroesophageal reflux** is the backflow of gastric acid into the esophagus
- **Gastroesophageal reflux disease (GERD)** : occurs when symptoms of reflux happen **two or more times a week**.

Gastroesophageal Reflux Disease

- Because of abnormal relaxation of the lower esophageal sphincter
- Other contributing factors are:
 - increased intra-abdominal pressure (e.g., related to hiatal hernia, obesity, or pregnancy)
 - decreased esophageal motility.

Hiatal Hernia



Gastroesophageal Reflux Disease

- Pain frequently worsens when:
 - the person lies down
 - bends over after eating
 - wears tight-fitting clothing

- Chronic untreated GERD may cause:
 - reflux esophagitis
 - dysphagia
 - Adenocarcinoma (epithelial cells of the esophagus)
 - esophageal ulcers
 - bleeding

GERD: Nutrition Therapy

1. lifestyle modification, including nutrition therapy
 - (Box 17.2)
2. drug therapy
3. surgical intervention

LIFESTYLE AND NUTRITION THERAPY RECOMMENDATIONS FOR THE TREATMENT OF GERD

Lifestyle Recommendations

Exercise at moderate intensity for at least

30 minutes/day

Lose weight to keep BMI <25

Avoid lying down for 3 hours after meals

Elevate the head of the bed during sleep

Nutrition Therapy Recommendations

Avoid:

- Large and/or fatty meals within 3 hours of bed
- Eating too fast
- Drinking alcohol, caffeinated beverages, regular and decaffeinated coffee, soft drinks
- Eating high-fat foods, spicy foods, chocolate, mint, and citrus foods

Source: Vemulapalli, R. (2008). Diet and lifestyle modifications in the management of gastroesophageal reflux disease. *Nutrition in Clinical Practice*, 23, 293–298.

DISORDERS OF THE **STOMACH**

1. Peptic Ulcer Disease
2. Dumping Syndrome

Peptic Ulcer Disease

- Erosion of the mucosal layer of the stomach (gastric ulcer)
- Duodenum (duodenal ulcer) caused by an excess secretion of, or decreased mucosal resistance to, hydrochloric acid.

Causes of peptic ulcer

1. *Helicobacter pylori*

- destroying the bacteria—with antibiotics—generally cures the ulcer.

2. The second leading cause of peptic ulcers is the use of nonsteroidal antiinflammatory drugs (NSAIDs).

Eating spicy food does not cause ulcers.

Ulcer : Nutrition Therapy

- There is no evidence that **diet** causes peptic ulcer disease or speeds ulcer healing
- Patients may be told to avoid :
 - coffee, alcohol, and chocolate
- because they stimulate gastric acid secretion

Ulcer : Nutrition Therapy

- Avoid items that stimulate gastric acid secretion, namely coffee (decaffeinated and regular), alcohol, and pepper.
- Avoid eating 2 hours before bed.
- Avoid individual intolerances.