49 Fecal Elimination

LEARNING OUTCOMES

After completing this chapter, you will be able to:

1. Describe the physiology of defecation.
2. Distinguish normal from abnormal characteristics and constituents of feces.
3. Identify factors that influence fecal elimination and patterns of defecation.
4. Identify common causes and effects of selected fecal elimination problems.
5. Describe methods used to assess fecal elimination.
6. Identify examples of nursing diagnoses, outcomes, and interventions for clients with elimination problems.
7. Identify measures that maintain normal fecal elimination patterns.
8. Describe the purpose and action of commonly used enema solutions.
9. Describe essentials of fecal stoma care for clients with an ostomy.
10. Recognize when it is appropriate to delegate assistance with fecal elimination to unlicensed assistive personnel.
11. Verbalize the steps used in:
    a. Administering an enema.
    b. Changing a bowel diversion ostomy appliance.
12. Demonstrate appropriate documentation and reporting related to fecal elimination.

KEY TERMS

bedpan, *1223*
bowel incontinence, *1216*
carminatives, *1226*
cathartics, *1223*
chyme, *1210*
colostomy, *1218*
commode, *1223*
constipation, *1215*
defecation, *1211*
diarrhea, *1216*
enema, *1226*
fecal impaction, *1215*
fecal incontinence, *1216*
feces, *1210*
flatulence, *1217*
flatus, *1211*
gastrocolic reflex, *1213*
gastrostomy, *1218*
haustra, *1210*
haustral churning, *1211*
hemorrhoids, *1211*
ileostomy, *1218*
ingestion, *1210*
jejunostomy, *1218*
laxatives, *1215*
mass peristalsis, *1211*
meconium, *1212*
ostomy, *1218*
peristalsis, *1211*
stoma, *1218*
stool, *1210*
suppositories, *1225*

INTRODUCTION

Nurses frequently are consulted or involved in assisting clients with elimination problems. These problems can be embarrassing to clients and can cause considerable discomfort. The elimination of feces is a prominent public topic in North America. For example, laxative advertisements, describing such feelings as tiredness due to irregularity, keep the subject in the public consciousness. Some older adults are preoccupied with their bowels. People who have had a bowel movement once a day for 75 years can view missing one day as a serious problem.

PHYSIOLOGY OF DEFECATION

Elimination of the waste products of digestion from the body is essential to health. The excreted waste products are referred to as **feces** or **stool**.

Large Intestine

The large intestine extends from the ileocecal (ileocolic) valve, which lies between the small and large intestines, to the anus. The colon (large intestine) in the adult is generally about 125 to 150 cm (50 to 60 in.) long. It has seven parts: the cecum; ascending, transverse, and descending colons; sigmoid colon; rectum; and anus (Figure 49–1 ■).

The large intestine is a muscular tube lined with mucous membrane. The muscle fibers are both circular and longitudinal, permitting the intestine to enlarge and contract in both width and length. The longitudinal muscles are shorter than the colon and therefore cause the large intestine to form pouches, or **haustra**.

The colon's main functions are the absorption of water and nutrients, the mucoid protection of the intestinal wall, and fecal elimination. The contents of the colon normally represent foods ingested over the previous 4 days, although most of the waste products are excreted within 48 hours of **ingestion** (the act of taking in food). The waste products leaving the stomach through the small intestine and then passing through the ileocecal valve are called **chyme**. The ileocecal valve, located at the junction of the ileum of the small intestine and the first part of the large intestine, regulates the flow of chyme into the large intestine and prevents backflow into the ileum. As much as 1,500 mL of chyme passes into the large intestine daily, and all but about 100 mL is reabsorbed in the proximal half of the colon. The 100 mL of fluid is excreted in the feces.

The colon also serves a protective function in that it secretes mucus. This mucus contains large amounts of bicarbonate ions. The mucous secretion is stimulated by excitation of parasympathetic nerves. During extreme stimulation—for example, as a result of emotions—large amounts of mucus are secreted, resulting in

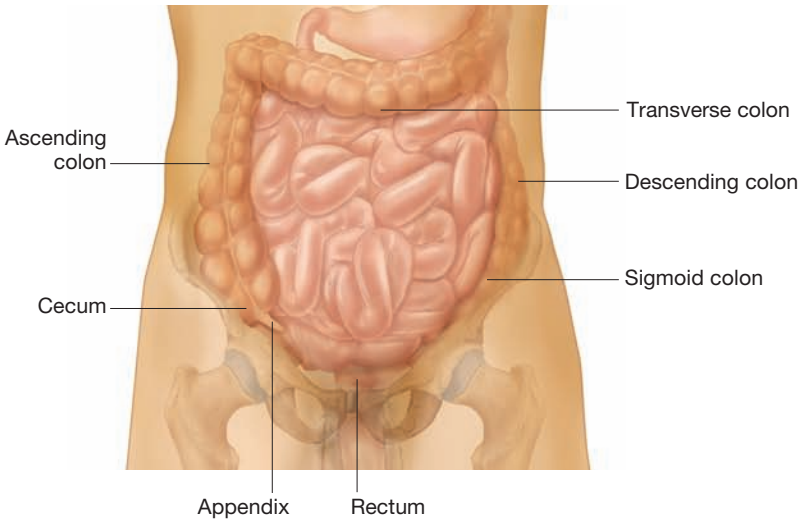


Figure 49–1 ■ The large intestine.
From *Medical Terminology: A Living Language*, 5th ed., by B. F. Fremgen and S. S. Frucht, 2013, Upper Saddle River, NJ: Pearson Education, Inc.

the passage of stringy mucus with little or no feces. Mucus serves to protect the wall of the large intestine from trauma by the acids formed in the feces, and it serves as an adherent for holding the fecal material together. Mucus also protects the intestinal wall from bacterial activity.

The colon acts to transport along its lumen the products of digestion, which are eventually eliminated through the anal canal. These products are flatus and feces. **Flatus** is largely air and the by-products of the digestion of carbohydrates. Three types of movements occur in the large intestine: haustral churning, colon peristalsis, and mass peristalsis. **Haustral churning** involves movement of the chyme back and forth within the haustra. In addition to mixing the contents, this action aids in the absorption of water and moves the contents forward to the next haustra. **Peristalsis** is wavelike movement produced by the circular and longitudinal muscle fibers of the intestinal walls; it propels the intestinal contents forward. Colon peristalsis is very sluggish and is thought to move the chyme very little along the large intestine. **Mass peristalsis**, the third type of colonic movement, involves a wave of powerful muscular contraction that moves over large areas of the colon. Usually mass peristalsis occurs after eating, stimulated by the presence of food in the stomach and small intestine. In adults, mass peristaltic waves occur only a few times a day.

Rectum and Anal Canal

The rectum in the adult is usually 10 to 15 cm (4 to 6 in.) long; the most distal portion, 2.5 to 5 cm (1 to 2 in.) long, is the anal canal. The rectum has folds that extend vertically. Each of the vertical folds contains a vein and an artery. It is believed that these folds help retain feces within the rectum. When the veins become distended, as can occur with repeated pressure, a condition known as **hemorrhoids** occurs (Figure 49–2 ■).

The anal canal is bounded by an internal and an external sphincter muscle (Figure 49–3 ■). The internal sphincter is under involuntary control, and the external sphincter normally is voluntarily controlled. The internal sphincter muscle is innervated by the autonomic nervous system; the external sphincter is innervated by the somatic nervous system.

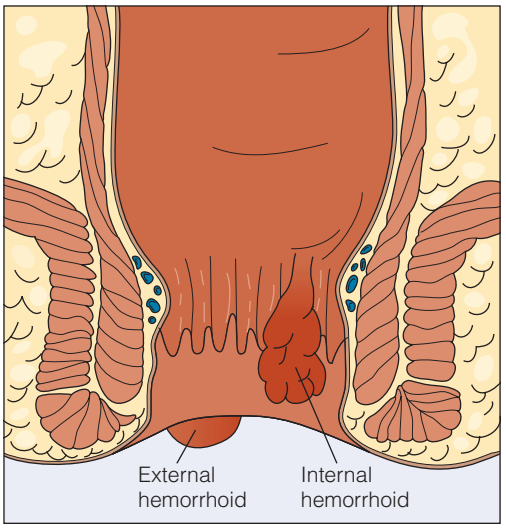


Figure 49–2 ■ Internal and external hemorrhoids.

Defecation

Defecation is the expulsion of feces from the anus and rectum. It is also called a *bowel movement*. The frequency of defecation is highly individual, varying from several times per day to two or three times per week. The amount defecated also varies from person to person. When peristaltic waves move the feces into the sigmoid colon and the rectum, the sensory nerves in the rectum are stimulated and the individual becomes aware of the need to defecate.

CLINICAL ALERT!

Individuals (especially children) may use very different terms for a bowel movement. The nurse may need to try several different common words before finding one the client understands.

When the internal anal sphincter relaxes, feces move into the anal canal. After the individual is seated on a toilet or bedpan, the external anal sphincter is relaxed voluntarily. Expulsion of the feces is

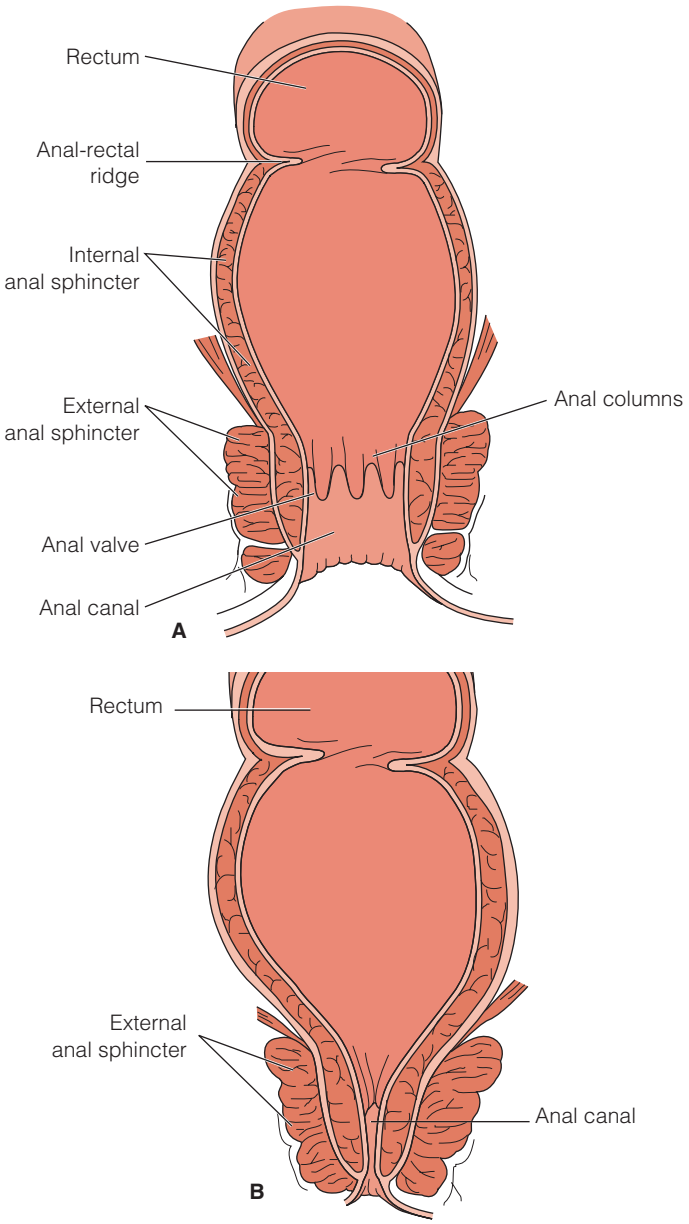


Figure 49–3 ■ The rectum, anal canal, and anal sphincters: *A,* open; *B,* closed.

assisted by contraction of the abdominal muscles and the diaphragm, which increases abdominal pressure, and by contraction of the muscles of the pelvic floor, which moves the feces through the anal canal. Normal defecation is facilitated by (a) thigh flexion, which increases the pressure within the abdomen, and (b) a sitting position, which increases the downward pressure on the rectum.

If the defecation reflex is ignored, or if defecation is consciously inhibited by contracting the external sphincter muscle, the urge to defecate normally disappears for a few hours before occurring again. Repeated inhibition of the urge to defecate can result in expansion of the rectum to accommodate accumulated feces and eventual loss of sensitivity to the need to defecate. Constipation can be the ultimate result.

Feces

Normal feces are made of about 75% water and 25% solid materials. They are soft but formed. If the feces are propelled very quickly along the large intestine, there is not time for most of the water in the chyme to be reabsorbed and the feces will be more fluid, containing perhaps 95% water. Normal feces require a normal fluid intake; feces that contain less water may be hard and difficult to expel.

Feces are normally brown, chiefly due to the presence of stercobilin and urobilin, which are derived from bilirubin (a red pigment in bile). Another factor that affects fecal color is the action of bacteria such as *Escherichia coli* or staphylococci, which are normally present in the large intestine. The action of microorganisms on the chyme is also responsible for the odor of feces. Table 49–1 lists the characteristics of normal and abnormal feces.

The amount of gas produced per day varies among individuals; passing gas around 13 to 21 times a day is normal (National Digestive Diseases Information Clearinghouse, 2013). The gases include carbon dioxide, methane, hydrogen, oxygen, and nitrogen. Some are swallowed with food and fluids taken by mouth, others are formed through the action of bacteria on the chyme in the large intestine, and other gas diffuses from the blood into the gastrointestinal tract.

FACTORS THAT AFFECT DEFECATION

Defecation patterns vary at different stages of life. Circumstances of diet, fluid intake and output, activity, psychological factors, defecation habits, medications, diagnostic and medical procedures, pathologic conditions, and pain also affect defecation.

Development

Newborns and infants, toddlers, children, and older adults are groups within which members have similarities in elimination patterns.

NEWBORNS AND INFANTS

Meconium is the first fecal material passed by the newborn, normally up to 24 hours after birth. It is black, tarry, odorless, and sticky. Transitional stools, which follow for about a week, are generally greenish yellow; they contain mucus and are loose.

Infants pass stool frequently, often after each feeding. Because the intestine is immature, water is not well absorbed and the stool is soft, liquid, and frequent. When the intestine matures, bacterial flora increase. After solid foods are introduced, the stool becomes less frequent and firmer.

Infants who are breast-fed have light yellow to golden feces, and infants who are taking formula will have dark yellow or tan stool that is more formed.

TODDLERS

Some control of defecation starts at 1 1/2 to 2 years of age. By this time, children have learned to walk, and the nervous and muscular systems are sufficiently well developed to permit bowel control. A desire to control daytime bowel movements and to use the toilet generally starts when the child becomes aware of (a) the discomfort caused by a soiled diaper and (b) the sensation that indicates the need for a bowel movement. Daytime control is typically attained by age 2 1/2, after a process of toilet training.

SCHOOL-AGE CHILDREN AND ADOLESCENTS

School-age children and adolescents have bowel habits similar to those of adults. Patterns of defecation vary in frequency, quantity, and

TABLE 49–1 Characteristics of Normal and Abnormal Feces

Characteristic	Normal	Abnormal	Possible Cause
Color	Adult: brown	Clay or white	Absence of bile pigment (bile obstruction); diagnostic study using barium
	Infant: yellow	Black or tarry	Drug (e.g., iron); bleeding from upper gastrointestinal tract (e.g., stomach, small intestine); diet high in red meat and dark green vegetables (e.g., spinach)
		Red	Bleeding from lower gastrointestinal tract (e.g., rectum); some foods (e.g., beets)
		Pale	Malabsorption of fats; diet high in milk and milk products and low in meat
		Orange or green	Intestinal infection
Consistency	Formed, soft, semisolid, moist	Hard, dry	Dehydration; decreased intestinal motility resulting from lack of fiber in diet, lack of exercise, emotional upset, laxative abuse
		Diarrhea	Increased intestinal motility (e.g., due to irritation of the colon by bacteria)
Shape	Cylindrical (contour of rectum) about 2.5 cm (1 in.) in diameter in adults	Narrow, pencil-shaped, or stringlike stool	Obstructive condition of the rectum
Amount	Varies with diet (about 100–400 g/day)		
Odor	Aromatic: affected by ingested food and individual's own bacterial flora	Pungent	Infection, blood
Constituents	Small amounts of undigested roughage, sloughed dead bacteria and epithelial cells, fat, protein, dried constituents of digestive juices (e.g., bile pigments, inorganic matter)	Pus Parasites Blood Large quantities of fat Foreign objects	Mucus Bacterial infection Inflammatory condition Gastrointestinal bleeding Malabsorption Accidental ingestion

consistency. Some school-age children may delay defecation because of an activity such as play.

OLDER ADULTS

Toner and Claros (2012) state that "up to half of all older adults suffer from constipation" (p. 32). This is due, in part, to reduced activity levels, inadequate fluid and fiber intake, and muscle weakness. Many older people believe that "regularity" means a bowel movement every day. Those who do not meet this criterion often seek over-the-counter (OTC) preparations to relieve what they believe to be constipation. Older adults should be advised that normal patterns of bowel elimination vary considerably. For some, a normal pattern may be every other day; for others, twice a day. Constipation can be relieved by increasing the fiber intake to 20 to 35 grams per day, unless contraindicated (Tabloski & Connell, 2014). Adequate roughage in the diet, adequate exercise, and 6 to 8 glasses of fluid daily are other essential preventive measures for constipation. A cup of hot water or tea at a regular time in the morning is helpful for some. Responding to the **gastrocolic reflex** (increased peristalsis of the colon after food has entered the stomach) is also an important consideration. For example, toileting is recommended 30 minutes after meals, especially after breakfast when the gastrocolic reflex is strongest (Toner & Claros, 2012).

The older adult should be warned that consistent use of laxatives inhibits natural defecation reflexes and is thought to cause rather than cure constipation. The habitual user of laxatives eventually requires larger or stronger doses because the effect is progressively reduced with continual use. Laxatives may also interfere with the body's electrolyte balance and decrease the absorption of certain vitamins. The reasons for constipation can range from lifestyle habits (e.g., lack of exercise) to serious malignant disorders (e.g., colorectal cancer). The nurse should evaluate any complaints of constipation carefully for each individual. A change in bowel habits over several weeks with or without weight loss, pain, or fever should be referred to a primary care provider for a complete medical evaluation. See Clinical Manifestations for risk factors and symptoms of colorectal cancer.

Diet

Sufficient bulk (cellulose, fiber) in the diet is necessary to provide fecal volume. Inadequate intake of dietary fiber contributes to the risk of developing obesity, type 2 diabetes, coronary artery disease, and colon cancer. Fiber is classified into two categories: insoluble fiber and soluble fiber. Insoluble fiber promotes the movement of material through the digestive system and increases stool bulk. Sources

CLINICAL MANIFESTATIONS

Colorectal Cancer

RISK FACTORS

- Nonmodifiable
  - Age (risk increases after age 50)
  - Race (African Americans and Jews of Eastern European descent)
  - Personal or family history of colorectal polyps
  - Personal history of inflammatory bowel disease
- Modifiable
  - Cigarette smoking
  - Poor diet (e.g., low in fiber and high in fat; high amounts of red meats and/or processed meats)
  - Lack of physical activity
  - Heavy consumption of alcohol

SYMPTOMS

Inform clients to see their primary care provider if they have any of the following:

- A change in bowel habits such as diarrhea, constipation, or narrowing of the stool that lasts for more than a few days
- A feeling of needing to have a bowel movement that is not relieved by doing so
- Rectal bleeding or blood in the stool (often, though, the stool will look normal)
- Cramping or steady abdominal pain
- Weakness and fatigue
- Unexpected weight loss

From "The Facts About Colorectal Cancer," by P. Walden, 2011, *Nursing made Incredibly Easy!*, 9(5), pp. 37–44; "What You Need to Know About Cancer of the Colon and Rectum," by National Cancer Institute, n.d. Retrieved from http://www.cancer.gov/cancertopics/wyntk/colon-and-rectal/page1/AllPages#4; "What Are the Risk Factors for Colorectal Cancer?" by American Cancer Society, 2014b. Retrieved from http://www.cancer.org/cancer/colonandrectumcancer/detailedguide/colorectal-cancer-risk-factors; and "Signs and Symptoms of Colorectal Cancer," by American Cancer Society, 2014a. Retrieved from http://www.cancer.org/cancer/colonandrectumcancer/detailedguide/colorectal-cancer-signs-and-symptoms.

of insoluble fiber include whole-wheat flour, wheat bran, nuts, and many vegetables. Soluble fiber dissolves in water to form a gel-like material. It can help lower blood cholesterol and glucose levels (Mayo Clinic, 2012). Sources of soluble fiber include oats, peas, beans, apples, citrus fruits, carrots, barley, and psyllium. The Mayo Clinic recommends the following daily amount of fiber:

Men ages 50 and younger: 38 grams
Men ages 51 and older: 30 grams
Women ages 50 and younger: 25 grams
Women ages 51 and older: 21 grams.

It is important to drink plenty of water because fiber works best when it absorbs water.

Bland diets and low-fiber diets are lacking in bulk and therefore create insufficient residue of waste products to stimulate the reflex for defecation. Low-residue foods, such as rice, eggs, and lean meats, move more slowly through the intestinal tract. Increasing fluid intake with such foods increases their rate of movement.

Certain foods are difficult or impossible for some people to digest. This inability results in digestive upsets and, in some instances, the passage of watery stools. Irregular eating can also impair regular defecation. Individuals who eat at the same times every day usually have a regularly timed, physiological response to the food intake and a regular pattern of peristaltic activity in the colon.

Spicy foods can produce diarrhea and flatus in some individuals. Excessive sugar can also cause diarrhea. Other foods that may influence bowel elimination include the following:

- Gas-producing foods, such as cabbage, onions, cauliflower, bananas, and apples
- Laxative-producing foods, such as bran, prunes, figs, chocolate, and alcohol
- Constipation-producing foods, such as cheese, pasta, eggs, and lean meat.

Fluid Intake and Output

Even when fluid intake is inadequate or output (e.g., urine or vomitus) is excessive for some reason, the body continues to reabsorb fluid from the chyme as it passes along the colon. The chyme becomes drier than normal, resulting in hard feces. In addition, reduced fluid intake slows the chyme's passage along the intestines, further increasing the reabsorption of fluid from the chyme. Healthy fecal elimination usually requires a daily fluid intake of 2,000 to 3,000 mL. If chyme moves abnormally quickly through the large intestine, however, there is less time for fluid to be absorbed into the blood; as a result, the feces are soft or even watery.

Activity

Activity stimulates peristalsis, thus facilitating the movement of chyme along the colon. Weak abdominal and pelvic muscles are often ineffective in increasing the intra-abdominal pressure during defecation or in controlling defecation. Weak muscles can result from lack of exercise, immobility, or impaired neurologic functioning. Clients confined to bed are often constipated.

Psychological Factors

Some people who are anxious or angry experience increased peristaltic activity and subsequent nausea or diarrhea. In contrast, people who are depressed may experience slowed intestinal motility, resulting in constipation. How a person responds to these emotional states is the result of individual differences in the response of the enteric nervous system to vagal stimulation from the brain.

Defecation Habits

Early bowel training may establish the habit of defecating at a regular time. Many people defecate after breakfast, when the gastrocolic reflex causes mass peristaltic waves in the large intestine. If a person ignores this urge to defecate, water continues to be reabsorbed, making the feces hard and difficult to expel. When the normal defecation reflexes are inhibited or ignored, these conditioned reflexes tend to be progressively weakened. When habitually ignored, the urge to defecate is ultimately lost. Adults may ignore these reflexes because of the pressures of time or work. Hospitalized clients may suppress the urge because of embarrassment about using a bedpan, because of lack of privacy, or because defecation is too uncomfortable.

Medications

Some drugs have side effects that can interfere with normal elimination. Some cause diarrhea; others, such as large doses of certain tranquilizers and repeated administration of morphine and codeine, cause

constipation because they decrease gastrointestinal activity through their action on the central nervous system. Iron supplements act more locally on the bowel mucosa and can cause constipation or diarrhea.

Some medications directly affect elimination. **Laxatives** are medications that stimulate bowel activity and so assist fecal elimination. Other medications soften stool, facilitating defecation. Certain medications suppress peristaltic activity and may be used to treat diarrhea.

Medications can also affect the appearance of the feces. Any drug that causes gastrointestinal bleeding (e.g., aspirin products) can cause the stool to be red or black. Iron salts lead to black stool because of the oxidation of the iron; antibiotics may cause a gray-green discoloration; and antacids can cause a whitish discoloration or white specks in the stool. Pepto-Bismol, a common OTC drug, causes stools to be black.

Diagnostic Procedures

Before certain diagnostic procedures, such as visualization of the colon (colonoscopy or sigmoidoscopy), the client is restricted from ingesting food or fluid. The client may also be given a cleansing enema prior to the examination. In these instances normal defecation usually will not occur until eating resumes.

Anesthesia and Surgery

General anesthetics cause the normal colonic movements to cease or slow by blocking parasympathetic stimulation to the muscles of the colon. Clients who have regional or spinal anesthesia are less likely to experience this problem.

Surgery that involves direct handling of the intestines can cause temporary cessation of intestinal movement. This condition, called ileus, usually lasts 24 to 48 hours. Listening for bowel sounds that reflect intestinal motility is an important nursing assessment following surgery.

Pathologic Conditions

Spinal cord injuries and head injuries can decrease the sensory stimulation for defecation. Impaired mobility may limit the client's ability to respond to the urge to defecate and the client may experience constipation. Or, a client may experience fecal incontinence because of poorly functioning anal sphincters.

Pain

Clients who experience discomfort when defecating (e.g., following hemorrhoid surgery) often suppress the urge to defecate to avoid the pain. Such clients can experience constipation as a result. Clients taking narcotic analgesics for pain may also experience constipation as a side effect of the medication.

FECAL ELIMINATION PROBLEMS

Four common problems are related to fecal elimination: constipation, diarrhea, bowel incontinence, and flatulence.

Constipation

Constipation may be defined as fewer than three bowel movements per week. This infers the passage of dry, hard stool or the passage of no stool. It occurs when the movement of feces through the large intestine is slow, thus allowing time for additional reabsorption of fluid from the large intestine. Associated with constipation are difficult evacuation of stool and increased effort or straining of the voluntary muscles of defecation. The person may also have a feeling of incomplete stool evacuation after defecation. However, it is important to define constipation in relation to the person's regular elimination pattern. Some people normally defecate only a few times a week; other people defecate more than once a day. Careful assessment of the person's habits is necessary before a diagnosis of constipation is made. Box 49–1 lists the common defining characteristics of constipation.

BOX 49–1 Sample Defining Characteristics of Constipation

- Decreased frequency of defecation
- Hard, formed stools
- Straining at stool; painful defecation
- Reports of rectal fullness or pressure or incomplete bowel evacuation
- Abdominal pain, cramps, or distention
- Anorexia, nausea
- Headache

Many causes and factors contribute to constipation. Among them are the following:

- Insufficient fiber intake
- Insufficient fluid intake
- Insufficient activity or immobility
- Irregular defecation habits
- Change in daily routine
- Lack of privacy
- Chronic use of laxatives or enemas
- Irritable bowel syndrome (IBS)
- Pelvic floor dysfunction or muscle damage
- Poor motility or slow transit
- Neurologic conditions (e.g., Parkinson's disease), stroke, or paralysis
- Emotional disturbances such as depression or mental confusion
- Medications such as opioids, iron supplements, antihistamines, antacids, and antidepressants
- Habitual denial and ignoring the urge to defecate.

Constipation can cause health problems for some clients. In children constipation is often associated with changes in activity, diet, and toileting habits (Ball, Bindler, & Cowen, 2014). Straining associated with constipation often is accompanied by holding the breath. This Valsalva maneuver can present serious problems to people with heart disease, brain injuries, or respiratory disease. Holding the breath while bearing down increases intrathoracic pressure and vagal tone, slowing the pulse rate.

FECAL IMPACTION

Fecal impaction is a mass or collection of hardened feces in the folds of the rectum. Impaction results from prolonged retention and accumulation of fecal material. In severe impactions the feces accumulate and extend well up into the sigmoid colon and beyond. A client who has a fecal impaction will experience the passage of liquid fecal seepage (diarrhea) and no normal stool. The liquid portion of

DRUG CAPSULE

Emollient or Surfactant docusate calcium (Surfak) docusate sodium (Colace)

CLIENT WITH DRUGS FOR TREATING THE LOWER GASTROINTESTINAL TRACT

Docusates lower the surface tension of fecal material, which allows water and lipids to penetrate the stool, resulting in a softer fecal mass. They do not stimulate peristalsis.

Docusates are commonly used for prevention of constipation and to decrease the strain of defecation in individuals who should avoid straining during bowel movements (e.g., cardiac disease [prevent Valsalva maneuver], eye surgery, rectal surgery).

NURSING RESPONSIBILITIES

- Assess the client for abdominal distention, bowel sounds, and usual bowel movement frequency.
- Evaluate the effectiveness of medication.

CLIENT AND FAMILY TEACHING

- Advise the client to drink a glass of fluid (e.g., water, juice, milk) with each dose.
- Explain that it may take 1 to 3 days to soften fecal material.
- Advise the client not to take docusate within 2 hours of other laxatives, especially mineral oil, because it may cause increased absorption of the mineral oil.
- Discuss other forms of bowel regulation (e.g., increasing fiber intake, fluid intake, and activity).

Note: Prior to administering any medication, review all aspects with a current drug handbook or other reliable source.

the feces seeps out around the impacted mass. Impaction can also be assessed by digital examination of the rectum, during which the hardened mass can often be palpated.

Along with fecal seepage and constipation, symptoms include frequent but nonproductive desire to defecate and rectal pain. A generalized feeling of illness results; the client becomes anorexic, the abdomen becomes distended, and nausea and vomiting may occur.

The causes of fecal impaction are usually poor defecation habits and constipation. Also, the administration of medications such as anticholinergics and antihistamines will increase the client's risk in the development of a fecal impaction. The barium used in radiologic examinations of the upper and lower gastrointestinal tracts can also be a causative factor. Therefore, after these examinations, laxatives or enemas are usually given to ensure removal of the barium.

CLINICAL ALERT!

An older adult with a fecal impaction may show symptoms of delirium. Assess for fecal impaction if the client with constipation problems has a sudden change in mental status.

Digital examination of the impaction through the rectum should be done gently and carefully. Although digital rectal examination is within the scope of nursing practice, some agency policies require a primary care provider's order for digital manipulation and removal of a fecal impaction.

Although fecal impaction can generally be prevented, treatment of impacted feces is sometimes necessary. When fecal impaction is suspected, the client is often given an oil retention enema, a cleansing enema 2 to 4 hours later, and daily additional cleansing enemas, suppositories, or stool softeners. If these measures fail, manual removal is often necessary.

Diarrhea

Diarrhea refers to the passage of liquid feces and an increased frequency of defecation. It is the opposite of constipation and results from rapid movement of fecal contents through the large intestine. Rapid passage of chyme reduces the time available for the large intestine to reabsorb water and electrolytes. Some people pass stool with increased frequency, but diarrhea is not present unless the stool is relatively unformed and excessively liquid. The person with diarrhea finds it difficult or impossible to control the urge to defecate. Diarrhea and the threat of incontinence are sources of concern and embarrassment. Often, spasmodic cramps are associated with diarrhea. Bowel sounds are increased. With persistent diarrhea, irritation of the anal region extending to the perineum and buttocks generally results. Fatigue, weakness, malaise, and emaciation are the results of prolonged diarrhea.

When the cause of diarrhea is irritants in the intestinal tract, diarrhea is thought to be a protective flushing mechanism. It can create serious fluid and electrolyte losses in the body, however, that can develop within frighteningly short periods of time, particularly in infants, small children, and older adults.

Clostridium difficile–associated disease, which produces mucoid and foul-smelling diarrhea, has been increasing in recent years. Clients at the highest risk for the development of *C. difficile* include immunosuppressed individuals, clients on chemotherapy, and those who have recently used antimicrobial agents, usually fluoroquinolones (Grossman & Mager, 2010). Older adults are at the greatest risk due to underlying disease(s) and greater exposure in hospitals and extended care facilities (Diggs & Surawicz, 2010). Infection control against *C. difficile* infection includes hand hygiene, contact precautions, and cleaning of surfaces with a bleach solution. All individuals involved in the care of the client need to be reminded to wash their hands with soap and water because alcohol-based hand gels are not effective against *C. difficile*. Also, wearing gloves when coming into contact with soiled linens is needed to prevent the spread of the bacteria and spores that exist with *C. difficile* (Grossman & Mager, 2010). Table 49–2 lists some of the major causes of diarrhea and the physiological responses of the body.

The irritating effects of diarrhea stool increase the risk for skin breakdown. Therefore, the area around the anal region should be kept clean and dry and be protected with zinc oxide or other ointment. In addition, a fecal collector can be used (see page 1231).

Bowel Incontinence

Bowel incontinence, also called **fecal incontinence**, refers to the loss of voluntary ability to control fecal and gaseous discharges through the anal sphincter. The incontinence may occur at specific times, such as after meals, or it may occur irregularly. Two types of bowel incontinence are described: partial and major. Partial incontinence is the inability to control flatus or to prevent minor soiling. Major incontinence is the inability to control feces of normal consistency.

TABLE 49–2 Major Causes of Diarrhea

Cause	Physiological Effect
Psychological stress (e.g., anxiety)	Increased intestinal motility and mucous secretion
Medications	Inflammation and infection of mucosa due to overgrowth of pathogenic intestinal microorganisms
Antibiotics	Irritation of intestinal mucosa
Iron	Irritation of intestinal mucosa
Cathartics	Incomplete digestion of food or fluid
Allergy to food, fluid, drugs	Increased intestinal motility and mucous secretion
Intolerance of food or fluid	Reduced absorption of fluids
Diseases of the colon (e.g., malabsorption syndrome, Crohn's disease)	Inflammation of the mucosa often leading to ulcer formation

Fecal incontinence is generally associated with impaired functioning of the anal sphincter or its nerve supply, such as in some neuromuscular diseases, spinal cord trauma, and tumors of the external anal sphincter muscle.

The prevalence of bowel incontinence increases with age. Seven percent of women under the age of 40 years' experience bowel incontinence. That percentage increases to 22% or more by the sixth decade of life. In nursing homes the rate exceeds 50% and a significant number experience both fecal and urinary incontinence (Gallagher & Thompson, 2012, p. 95). Bowel incontinence is an emotionally distressing problem that can ultimately lead to social isolation. Afflicted individuals withdraw into their homes or, if in the hospital, the confines of their room, to minimize the embarrassment associated with soiling. Several surgical procedures are used for the treatment of fecal incontinence. These include repair of the sphincter and bowel diversion or colostomy.

Flatulence

The three primary sources of flatus are (1) action of bacteria on the chyme in the large intestine, (2) swallowed air, and (3) gas that diffuses between the bloodstream and the intestine.

Most gases that are swallowed are expelled through the mouth by eructation (belching). However, large amounts of gas can accumulate in the stomach, resulting in gastric distention. The gases formed in the large intestine are chiefly absorbed through the intestinal capillaries into the circulation. **Flatulence** is the presence of excessive flatus in the intestines and leads to stretching and inflation of the intestines (intestinal distention). Flatulence can occur in the colon from a variety of causes, such as foods (e.g., cabbage, onions), abdominal surgery, or narcotics. If the gas is propelled by increased colon activity before it can be absorbed, it may be expelled through the anus. If excessive gas cannot be expelled through the anus, it may be necessary to insert a rectal tube to remove it.

Evidence-Based Practice Is There a Difference Between Two Methods of Ostomy Care Instruction?

EVIDENCE-BASED PRACTICE

First-time ostomy clients have a great deal of new knowledge and skills to learn about living with and caring for an ostomy. Crawford et al. (2012) described the traditional method of instruction for new ostomy clients at their institution. That is, a certified wound ostomy continence nurse (CWOCN) spent three individual hour-long sessions with each new ostomy client. This was time intensive for the nurses and resulted in fatigue for the postoperative ostomy clients. They wanted to investigate the use of a unique, self-designed, integrated method of teaching incorporating a DVD. A review of the literature found that individual instruction versus DVD instruction has been previously studied. Only one study, however, addressed the subject of nurse involvement along with a DVD method, and there were no studies concerning ostomy clients and DVD instruction. The purpose of their randomized controlled study was to compare two methods of ostomy care instruction to determine their effect on clients' knowledge, skills, and confidence related to ostomy care. Both methods of instruction included one-on-one sessions with a CWOCN at the client's bedside. The "nurse instruction" group received three one-on-one sessions and the "nurse instruction plus DVD" group received two one-on-one sessions plus one session of nurse-guided video instruction in between. A post-test experimental design was used to compare the two instructional methods.

The study setting was two acute care hospitals in the Midwest. Subjects included adult clients, 21 years or older, with new fecal ostomies, either a colostomy or ileostomy. All 68 clients were independent in activities of daily living prior to their ostomy surgery. The subjects were randomly assigned to one of the instruction groups. A detailed instructional guide was prepared for the CWOCN investigators to ensure that all clients in the study received the same ostomy care information during the teaching sessions.

Three instruments were used to assess the subjects' knowledge, skills, and confidence in providing ostomy self-care. First was a knowledge test where scores were recorded as a percentage of correct answers. Direct observation was used to evaluate skills in four areas: emptying the pouch, caring for the stoma site, sizing and preparing pouching products, and applying the ostomy appliance. Finally, the subjects completed a visual analog scale indicating their levels of confidence in providing ostomy self-care. The results of the data analysis revealed that the nurse instruction plus DVD technique was as effective as the nurse instruction method.

IMPLICATIONS

This study confirmed the results of previous studies that found that video instruction was equally effective for increasing knowledge when compared to traditional instructional methods. It is important to remember that the authors designed an instructional method that incorporated DVD instruction as an adjunct to nurse instruction, not as a replacement for nurse instruction. The integrated DVD method offers flexibility in meeting the learning needs of the postoperative ostomy client and their family, especially after hospital discharge.

BOWEL DIVERSION OSTOMIES

An **ostomy** is an opening for the gastrointestinal, urinary, or respiratory tract onto the skin. There are many types of intestinal ostomies. A **gastrostomy** is an opening through the abdominal wall into the stomach. A **jejunostomy** opens through the abdominal wall into the jejunum, an **ileostomy** opens into the ileum (small bowel), and a **colostomy** opens into the colon (large bowel). Gastrostomies and jejunostomies are generally performed to provide an alternate feeding route. The purpose of bowel ostomies is to divert and drain fecal material. Bowel diversion ostomies are often classified according to (a) their status as permanent or temporary, (b) their anatomic location, and (c) the construction of the **stoma**, the opening created in the abdominal wall by the ostomy. A stoma is generally red in color and moist. Initially, slight bleeding may occur when the stoma is touched and this is considered normal. A person does not feel the stoma because there are no nerve endings in the stoma.

Permanence

Colostomies can be either temporary or permanent. Temporary colostomies are generally performed for traumatic injuries or inflammatory conditions of the bowel. They allow the distal diseased portion of the bowel to rest and heal. Permanent colostomies are performed to provide a means of elimination when the rectum or anus is nonfunctional as a result of a birth defect or a disease such as cancer of the bowel.

CLINICAL ALERT!

Surgery to reconnect the ends of the bowel of a temporary ostomy may be called a take-down.

Anatomic Location

An ileostomy generally empties from the distal end of the small intestine. A cecostomy empties from the cecum (the first part of the ascending colon). An ascending colostomy empties from the ascending colon, a transverse colostomy from the transverse colon, a descending colostomy from the descending colon, and a sigmoidostomy from the sigmoid colon (Figure 49–4 ■).

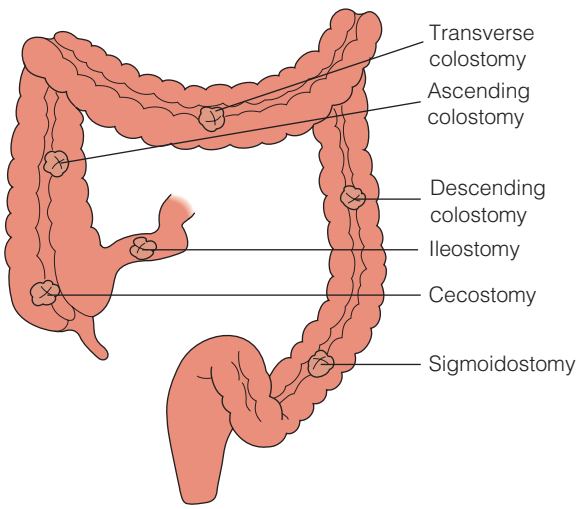


Figure 49–4 ■ The locations of bowel diversion ostomies.

The location of the ostomy influences the character and management of the fecal drainage. The farther along the bowel, the more formed the stool (because the large bowel reabsorbs water from the fecal mass) and the more control over the frequency of stomal discharge can be established. For example:

- An ileostomy produces liquid fecal drainage. Drainage is constant and cannot be regulated. Ileostomy drainage contains some digestive enzymes, which are damaging to the skin. For this reason, ileostomy clients must wear an appliance continuously and take special precautions to prevent skin breakdown. Compared to colostomies, however, odor is minimal because fewer bacteria are present.
- An ascending colostomy is similar to an ileostomy in that the drainage is liquid and cannot be regulated, and digestive enzymes are present. Odor, however, is a problem requiring control.
- A transverse colostomy produces a malodorous, mushy drainage because some of the liquid has been reabsorbed. There is usually no control.
- A descending colostomy produces increasingly solid fecal drainage. Stools from a sigmoidostomy are of normal or formed consistency, and the frequency of discharge can be regulated. People with a sigmoidostomy may not have to wear an appliance at all times, and odors can usually be controlled.

The length of time that an ostomy is in place also helps to determine the consistency of the stool, particularly with transverse and descending colostomies. Over time, the stool becomes more formed because the remaining functioning portions of the colon tend to compensate by increasing water reabsorption.

Surgical Construction of the Stoma

Stoma constructions are described as single, loop, divided, or double-barreled colostomies. The *single* stoma is created when one end of bowel is brought out through an opening onto the anterior abdominal wall. This is referred to as an *end* or *terminal colostomy;* the stoma is permanent (Figure 49–5 ■).

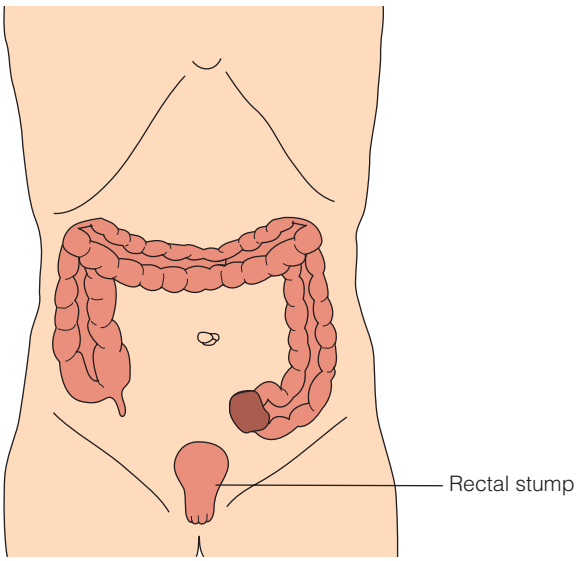


Figure 49–5 ■ End colostomy. The diseased portion of bowel is removed and a rectal pouch remains.

Figure 49–6 ■ Loop colostomy.
Courtesy of Cory Patrick Hartley, RN.

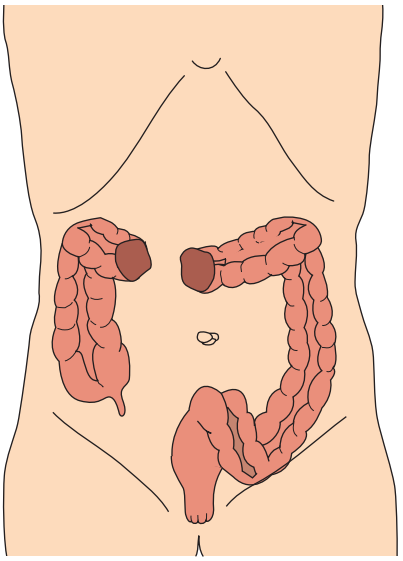


Figure 49–7 ■ Divided colostomy with two separated stomas.

In the *loop colostomy*, a loop of bowel is brought out onto the abdominal wall and supported by a plastic bridge or by a piece of rubber tubing (Figure 49–6 ■). A loop stoma has two openings: the proximal or afferent end, which is active, and the distal or efferent end, which is inactive. The loop colostomy is usually performed in an emergency procedure and is often situated on the right transverse colon. It is a bulky stoma that is more difficult to manage than a single stoma.

The *divided colostomy* consists of two edges of bowel brought out onto the abdomen but separated from each other (Figure 49–7 ■). The opening from the digestive or proximal end is the colostomy. The distal end in this situation is often referred to as a mucous fistula, since this section of bowel continues to secrete mucus. The divided colostomy is often used in situations where spillage of feces into the distal end of the bowel needs to be avoided.

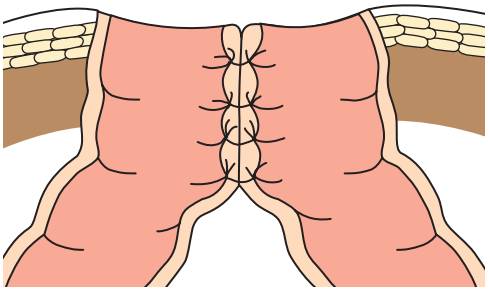


Figure 49–8 ■ Double-barreled colostomy.

The *double-barreled colostomy* resembles a double-barreled shotgun (Figure 49–8 ■). In this type of colostomy, the proximal and distal loops of bowel are sutured together for about 10 cm (4 in.) and both ends are brought up onto the abdominal wall.

LIFESPAN CONSIDERATIONS Factors in Potential Bowel Elimination Problems

CHILDREN

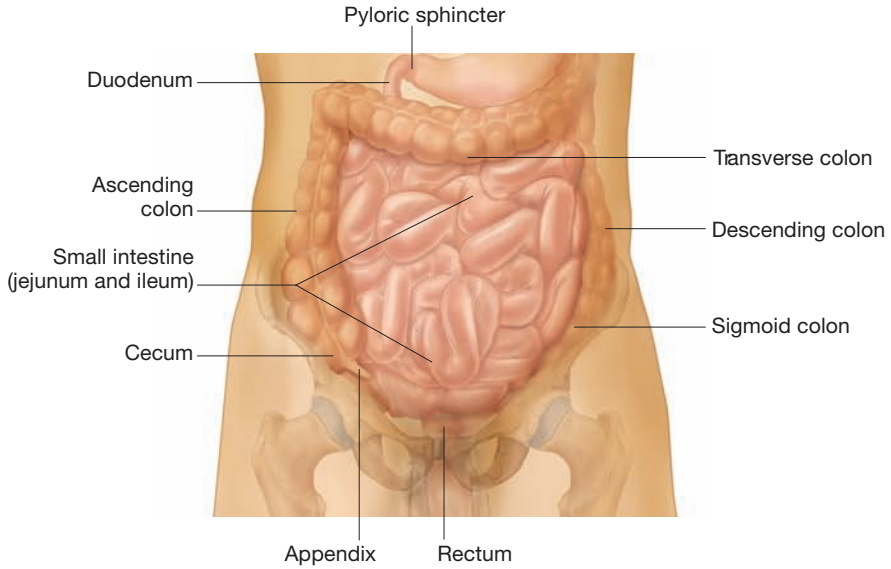
- Successful toilet training can prevent many problems with elimination. The family should be assessed for "readiness to train." Assess the child's physical, cognitive, and interpersonal skills, and parental readiness. Does the child have sphincter control (usually by 18 to 24 months)? Does the child understand the meaning of toileting? Is the child able to express him- or herself and does the child demonstrate interest in learning? Are parents ready to work with the child?
- Encourage a regular toileting routine for children. When toilet training, ensure that toddlers can rest their feet comfortably on the floor or a footstool, and are not frightened or pressured while toileting.
- An acute episode of dehydration and constipation (often related to an illness) can lead to chronic stool problems. Constipation can cause painful defecation, which causes the child to withhold stool, leading to more severe constipation, more pain on defecation, more withholding, and so on. Breaking the cycle by helping ease defecation is important to prevent long-term problems.

OLDER ADULTS

- Poor fluid intake and inability to eat a high-fiber diet, due to swallowing or chewing difficulties, are often causes of constipation.
- Medications that are commonly taken by older adults such as antacids, many antihypertensives, antidepressants, diuretics, and narcotics for pain also contribute to constipation.
- Clients receiving tube feedings can experience diarrhea. To alleviate it, they require a change of formula, a change in its strength, or a change in the speed or temperature of tube feeding administration.
- Clients receiving laxative preparation for x-rays or other procedures may experience fluid and electrolyte imbalances due to diarrhea.
- Individuals with cognitive impairment, such as Alzheimer's disease, may be unaware of what and when they eat or drink or of their bowel habits. It is important that caregivers monitor the person's bowel elimination patterns.
- Individuals with impaired mobility may have difficulty getting to the bathroom or using a regular toilet. A raised toilet seat and other devices, such as bars to assist in ambulation, may be very helpful. The decrease in activity may also contribute to constipation.

ANATOMY & PHYSIOLOGY REVIEW
Small and Large Intestines

Review the figure and reflect back on your anatomy and physiology courses.



Small and large intestines.
From *Medical Terminology: A Living Language*, 5th ed., by B. F. Fremgen and S. S. Frucht, 2013, Upper Saddle River, NJ: Pearson Education, Inc.

QUESTIONS

1. What are the primary functions of the small intestine?
2. What are the primary functions of the large intestine?
3. What part of the small intestine connects to the colon?
4. What consistency would the stool be in a client with an ileostomy and why?
5. Compare and contrast the consistency of stool in a transverse colostomy and a descending colostomy.
6. How would you describe the stool discharged from a sigmoidostomy?

See student resource website for answers.

●○● NURSING MANAGEMENT

Assessing

Assessment of fecal elimination includes taking a nursing history; performing a physical examination of the abdomen, rectum, and anus; and inspecting the feces. The nurse also should review any data obtained from relevant diagnostic tests.

Nursing History

A nursing history for fecal elimination helps the nurse ascertain the client's normal pattern. The nurse elicits a description of usual feces and any recent changes and collects information about any past or current problems with elimination, the presence of an ostomy, and factors influencing the elimination pattern.

Examples of questions to elicit this information are shown in the Assessment Interview. The number of questions to ask is adapted to the individual client, according to the client's responses in the first three categories. For example, questions about factors influencing elimination might be addressed only to clients who are experiencing problems.

When eliciting data about the client's defecation pattern, the nurse needs to understand that the time of defecation and the amount of feces expelled are as individual as the frequency of defecation. Often, the patterns individuals follow depend largely on early training and on convenience.

Physical Examination

Physical examination of the abdomen in relation to fecal elimination problems includes inspection, auscultation, percussion, and palpation with specific reference to the intestinal tract. Auscultation precedes palpation because palpation can alter peristalsis. Examination of the rectum and anus includes inspection and palpation. Physical examination of the abdomen, rectum, and anus is discussed in Chapter 30 ∞.

Inspecting the Feces

Observe the client's stool for color, consistency, shape, amount, odor, and the presence of abnormal constituents. Table 49–1, earlier in this chapter, summarizes normal and abnormal characteristics of stool and possible causes.

Diagnostic Studies

Diagnostic studies of the gastrointestinal tract include direct visualization techniques, indirect visualization techniques, and laboratory tests for abnormal constituents (see Chapter 34 ∞).

ASSESSMENT INTERVIEW Fecal Elimination

DEFECATION PATTERN
- When do you usually have a bowel movement?
- Has this pattern changed recently?

DESCRIPTION OF FECES AND ANY CHANGES
- Have you noticed any changes in the color, texture (hard, soft, watery), shape, or odor of your stool recently?

FECAL ELIMINATION PROBLEMS
- What problems have you had or do you now have with your bowel movements (constipation, diarrhea, excessive flatulence, seepage, or incontinence)?
- When and how often does it occur?
- What do you think causes it (food, fluids, exercise, emotions, medications, disease, surgery)?
- What have you tried to solve the problem, and how effective was it?

FACTORS INFLUENCING ELIMINATION
- *Use of elimination aids.* What routines do you follow to maintain your usual defecation pattern? Do you use natural aids such as specific foods or fluids (e.g., a glass of hot lemon juice before breakfast), laxatives, or enemas to maintain elimination?
- *Diet.* What foods do you believe affect defecation? What foods do you typically eat? What foods do you avoid? Do you take meals at regular times?
- *Fluid.* What amount and kind of fluid do you take each day (e.g., 6 glasses of water, 2 cups of coffee)?
- *Exercise.* What is your usual daily exercise pattern? (Obtain specifics about exercise rather than asking whether it is sufficient; ideas of what is sufficient vary among individuals.)
- *Medications.* Have you taken any medications that could affect the intestinal tract (e.g., iron, antibiotics)?
- *Stress.* Are you experiencing any stress? Do you think this affects your defecation pattern? How?

PRESENCE AND MANAGEMENT OF OSTOMY
- What is your usual routine with your colostomy/ileostomy?
- What type of appliance do you wear and did you bring a spare with you?
- What problems, if any, do you have with it?
- How can the nurses help you manage your colostomy/ileostomy?

Diagnosing

NANDA International (Herdman & Kamitsuru, 2014) includes the following diagnostic labels for fecal elimination problems:

- *Bowel Incontinence*
- *Constipation*
- *Risk for Constipation*
- *Perceived Constipation*
- *Diarrhea*
- *Dysfunctional Gastrointestinal Motility.*

Clinical application of selected diagnoses is shown at the end of the chapter in the Nursing Care Plan and Concept Map.

Fecal elimination problems may affect many other areas of human functioning and as a consequence may be the etiology of other NANDA diagnoses. Examples follow:

- *Risk for Deficient Fluid Volume* and/or *Risk for Electrolyte Imbalance* related to
  a. Prolonged diarrhea
  b. Abnormal fluid loss through ostomy
- *Risk for Impaired Skin Integrity* related to
  a. Prolonged diarrhea
  b. Bowel incontinence
  c. Bowel diversion ostomy
- *Situational Low Self-Esteem* related to
  a. Ostomy
  b. Fecal incontinence
  c. Need for assistance with toileting
- *Disturbed Body Image* related to
  a. Ostomy
  b. Bowel incontinence
- *Deficient Knowledge (Bowel Training, Ostomy Management)* related to lack of previous experience
- *Anxiety* related to
  a. Lack of control of fecal elimination secondary to ostomy
  b. Response of others to ostomy.

Planning

The major goals for clients with fecal elimination problems are to:

- Maintain or restore normal bowel elimination pattern.
- Maintain or regain normal stool consistency.
- Prevent associated risks such as fluid and electrolyte imbalance, skin breakdown, abdominal distention, and pain.

Appropriate preventive and corrective nursing interventions that relate to these must be identified. Specific nursing activities associated with each of these interventions can be selected to meet the client's individual needs. Examples of clinical applications of these using NANDA, NIC, and NOC designations are shown in the Nursing Care Plan at the end of the chapter.

Planning for Home Care

Clients who have bowel diversion ostomies, who wear pouches, or who have other ongoing elimination problems will need continuing care in the home setting. In preparation for discharge, the nurse needs to assess the client's and family's ability to meet specific care needs. The Home Care Assessment outlines the specific assessment data required before developing a home care plan. Using the assessment data, the nurse designs a teaching plan for the client and family (see Client Teaching).

Implementing

Promoting Regular Defecation

The nurse can help clients achieve regular defecation by attending to (a) the provision of privacy, (b) timing, (c) nutrition and fluids, (d) exercise, and (e) positioning. See Client Teaching for healthy habits related to bowel elimination.

Privacy

Privacy during defecation is extremely important to many people. The nurse should therefore provide as much privacy as possible for such clients but may need to stay with those who are too weak to be left alone. Some clients also prefer to wipe, wash, and dry themselves

Home Care Assessment Fecal Elimination

PATIENT-CENTERED CARE

CLIENT AND ENVIRONMENT

- *Self-care abilities for toileting:* ability to get to the toilet, to manipulate clothing for toileting, to perform toileting hygiene, and to flush the toilet
- *Mechanical aids required:* walker, cane, wheelchair, raised toilet seat, grab bars, bedpan, commode
- *Mechanical barriers that limit access to the toilet or are unsafe:* poor lighting, cluttered pathway to bathroom, narrow doorway for wheelchair, and so on
- *Bowel elimination problem:* alterations in characteristics of feces, diarrhea, constipation, incontinence, presence of ostomy, and methods of handling these
- *Level of knowledge:* planned bowel management or training program, prescribed medications, ostomy care, dietary alterations, and fluid and exercise requirements or restrictions
- *Facilities:* adequacy of bathroom facilities to facilitate toileting hygiene and ostomy care and to contain potentially infectious fecal effluent or stool

FAMILY

- *Caregiver availability and skills:* people able to assist with toileting, medications, ostomy care, or other prescribed therapeutic measures
- *Family role changes and coping:* effect on financial status, parenting and spousal roles, sexuality, social roles
- *Alternate potential primary or respite caregivers:* for example, other family members, volunteers, church members, paid caregivers or housekeeping services; available community respite care (adult day care, senior centers)

COMMUNITY

- Availability of and familiarity with possible sources of assistance: equipment and supply companies, financial assistance, home health agencies

CLIENT TEACHING

Fecal Elimination

FACILITATING TOILETING

- Ensure safe and easy access to the toilet. Make sure lighting is appropriate, scatter rugs are removed or securely fastened, and so on.
- Facilitate instruction as needed about transfer techniques.
- Suggest ways that garments can be adjusted to make disrobing easier for toileting (e.g., Velcro closing on clothing).

MONITORING BOWEL ELIMINATION PATTERN

- Instruct the client, if appropriate, to keep a record of time and frequency of stool passage, any associated pain, and color and consistency of the stool.

DIETARY ALTERATIONS

- Provide information about required food and fluid alterations to promote defecation or to manage diarrhea.

MEDICATIONS

- Discuss problems associated with overuse of laxatives, if appropriate, and the use of alternatives to laxatives, suppositories, and enemas.
- Discuss the addition of a fiber supplement if the client is taking a constipating medication.

MEASURES SPECIFIC TO ELIMINATION PROBLEM

- Provide instructions associated with specific elimination problems and treatment, such as:
  - Constipation
  - Diarrhea
  - Ostomy care.

COMMUNITY AGENCIES AND OTHER SOURCES OF HELP

- Make appropriate referrals to home care or community care for assistance with resources such as installation of grab bars and raised toilet seats, structural alterations for wheelchair access, homemaker or home health aide services to assist with ADLs, and an enterostomal therapy nurse for assistance with stoma care and selection of ostomy appliances.
- Provide information about companies where durable medical equipment (e.g., raised toilet seats, commodes, bedpans, urinals) can be purchased, rented, or obtained free of charge, and where medical supplies such as incontinence pads or ostomy irrigating supplies and appliances can be obtained.
- Suggest additional sources of information and help such as ostomy self-help and support groups or clubs.

CLIENT TEACHING

Healthy Defecation

- Establish a regular exercise regimen.
- Include high-fiber foods, such as vegetables, fruits, and whole grains, in the diet.
- Maintain fluid intake of 2,000 to 3,000 mL/day.
- Do not ignore the urge to defecate.
- Allow time to defecate, preferably at the same time each day.
- Avoid OTC medications to treat constipation and diarrhea.

after defecating. A nurse may need to provide water and a washcloth and towel for this purpose.

Timing

A client should be encouraged to defecate when the urge is recognized. To establish regular bowel elimination, the client and nurse can discuss when mass peristalsis normally occurs and provide time for defecation. Many people have well-established routines. Other activities, such as bathing and ambulating, should not interfere with the defecation time.

Nutrition and Fluids

The diet a client needs for regular normal elimination varies, depending on the kind of feces the client currently has, the frequency of defecation, and the types of foods that the client finds assist with normal defecation.

For Constipation Increase daily fluid intake, and instruct the client to drink hot liquids, warm water with a squirt of fresh lemon, and fruit juices, especially prune juice. Include fiber in the diet, that is, foods such as raw fruit, bran products, and whole-grain cereals and bread.

For Diarrhea Encourage oral intake of fluids and bland food. Eating small amounts can be helpful because small amounts are more easily

CLIENT TEACHING

Managing Diarrhea

Drink at least 8 glasses of water per day to prevent dehydration. Consider drinking a few glasses of electrolyte replacement fluids a day.

- Eat foods with sodium and potassium. Most foods contain sodium. Potassium is found in meats and many vegetables and fruits, especially purple grape juice, tomatoes, potatoes, bananas, cooked peaches, and apricots.
- Increase foods containing soluble fiber, such as rice, oatmeal, and skinless fruits and potatoes.
- Avoid alcohol and beverages with caffeine, which aggravate the problem.
- Limit foods containing insoluble fiber, such as high-fiber whole-wheat and whole-grain breads and cereals, and raw fruits and vegetables.
- Limit fatty foods.
- Thoroughly clean and dry the perianal area after passing stool to prevent skin irritation and breakdown. Use soft toilet tissue to clean and dry the area. Apply a dimethicone-based cream or alcohol-free barrier film as needed.
- If possible, discontinue medications that cause diarrhea.
- When diarrhea has stopped, reestablish normal bowel flora by eating fermented dairy products, such as yogurt or buttermilk.
- Seek a primary care provider consultation right away if weakness, dizziness, or loose stools persist more than 48 hours.

absorbed. Excessively hot or cold fluids should be avoided because they stimulate peristalsis. In addition, highly spiced foods and high-fiber foods can aggravate diarrhea. See Client Teaching for details about managing diarrhea.

For Flatulence Limit carbonated beverages, the use of drinking straws, and chewing gum—all of which increase the ingestion of air. Gas-forming foods, such as cabbage, beans, onions, and cauliflower, should also be avoided.

Exercise

Regular exercise helps clients develop a regular defecation pattern. A client with weak abdominal and pelvic muscles (which impede normal defecation) may be able to strengthen them with the following isometric exercises:

- In a supine position, the client tightens the abdominal muscles as though pulling them inward, holding them for about 10 seconds and then relaxing them. This should be repeated 5 to 10 times, four times a day, depending on the client's health.
- Again in a supine position, the client can contract the thigh muscles and hold them contracted for about 10 seconds, repeating the exercise 5 to 10 times, four times a day. This helps the client confined to bed gain strength in the thigh muscles, thereby making it easier to use a bedpan.

Positioning

Although the squatting position best facilitates defecation, on a toilet seat the best position for most people seems to be leaning forward.

For clients who have difficulty sitting down and getting up from the toilet, an elevated toilet seat can be attached to a regular toilet. Clients then do not have to lower themselves as far onto the seat and do not have to lift as far off the seat. Elevated toilet seats can be purchased for use in the home.

Figure 49–9 ■ A commode with overlying seat.

A bedside **commode**, a portable chair with a toilet seat and a receptacle beneath that can be emptied, is often used for the adult client who can get out of bed but is unable to walk to the bathroom. Some commodes have wheels and can slide over the base of a regular toilet when the waste receptacle is removed, thus providing clients the privacy of a bathroom. Some commodes have a seat and can be used as a chair (Figure 49–9 ■). Potty chairs are available for children.

Clients restricted to bed may need to use a **bedpan**, a receptacle for urine and feces. Female clients use a bedpan for both urine and feces; male clients use a bedpan for feces and a urinal for urine. The two main types of bedpans are the regular high-back pan and the slipper, or fracture, pan (Figure 49–10 ■). The slipper pan has a low back and is used for clients unable to raise their buttocks because of physical problems or therapy that contraindicates such movement. Many older adults benefit from the use of a slipper pan. See Practice Guidelines for the techniques of giving and removing a bedpan.

Teaching About Medications

The most common categories of medications affecting fecal elimination are cathartics and laxatives, antidiarrheals, and antiflatulents.

Cathartics and Laxatives

Cathartics are drugs that induce defecation. They can have a strong, purgative effect. A laxative is mild in comparison to a cathartic, and it produces soft or liquid stools that are sometimes accompanied by abdominal cramps. Examples of cathartics are castor oil, cascara,

Figure 49–10 ■ *Left,* The high-back or regular bedpan; *right,* the slipper or fracture pan.

PRACTICE GUIDELINES

Giving and Removing a Bedpan

- Provide privacy.
- Wear clean gloves.
- If the bedpan is metal, warm it by rinsing it with warm water.
- Adjust the bed to a height appropriate to prevent back strain.
- Elevate the side rail on the opposite side to prevent the client from falling out of bed.
- Ask the client to assist by flexing the knees, resting the weight on the back and heels, and raising the buttocks, or by using a trapeze bar, if present.
- Help lift the client as needed by placing one hand under the lower back, resting your elbow on the mattress, and using your forearm as a lever.
- Lubricate the back of the bedpan with a small amount of hand lotion or liquid soap to reduce tissue friction and shearing.
- Place a regular bedpan so that the client's buttocks rest on the smooth, rounded rim. Place a slipper pan with the flat, low end under the client's buttocks (Figure 49–11 ■).

Figure 49–11 ■ Placing a slipper pan under the buttocks.

- For the client who cannot assist, obtain the assistance of another nurse to help lift the client onto the bedpan or place the client on his or her side, place the bedpan against the buttocks (Figure 49–12 ■), and roll the client back onto the bedpan.
- To provide a more normal position for the client's lower back, elevate the client's bed to a semi-Fowler's position, if permitted. If elevation is contraindicated, support the client's back with pillows as needed to prevent hyperextension of the back.
- Cover the client with bed linen to maintain comfort and dignity.
- Provide toilet tissue, place the call light within reach, lower the bed to the low position, elevate the side rail if indicated, and leave the client alone.
- Answer the call light promptly.

Figure 49–12 ■ Placing a regular bedpan against the client's buttocks.

PRACTICE GUIDELINES

Giving and Removing a Bedpan—*continued*

- Do not leave anyone on a bedpan longer than 15 minutes unless they are able to remove the pan themselves. Lengthy stays on a bedpan can cause skin breakdown.
- When removing the bedpan, return the bed to the position used when giving the bedpan, hold the bedpan steady to prevent spillage of its contents, cover the bedpan, and place it on the adjacent chair.
- If the client needs assistance, apply gloves and wipe the client's perineal area with several layers of toilet tissue. If a specimen is to be collected, discard the soiled tissue into a moisture-proof receptacle other than the bedpan. For female clients, clean from the urethra toward the anus to prevent transferring rectal microorganisms into the urinary meatus.
- Wash the perineal area of dependent clients with soap and water as indicated and thoroughly dry the area.
- For all clients, offer warm water, soap, a washcloth, and a towel to wash the hands.
- Assist the client to a comfortable position, empty and clean the bedpan, and return it to the bedside.
- Remove and discard your gloves and wash your hands.
- Spray the room with air freshener as needed to control odor unless contraindicated because of respiratory problems or allergies.
- Document color, odor, amount, and consistency of urine and feces, and the condition of the perineal area.

phenolphthalein, and bisacodyl. Table 49–3 describes the different types of laxatives.

Laxatives are contraindicated in the client who has nausea, cramps, colic, vomiting, or undiagnosed abdominal pain. Clients need to be informed about the dangers of laxative use. Continual use of laxatives to encourage bowel evacuation weakens the bowel's natural responses to fecal distention, resulting in chronic constipation. To eliminate chronic laxative use, it is usually necessary to teach the client about dietary fiber, regular exercise, taking sufficient fluids, and establishing regular defecation habits. In addition, any medication regimen should be examined to see whether it could cause constipation.

Some laxatives are given in the form of **suppositories**. These act in various ways: by softening the feces, by releasing gases such as carbon dioxide to distend the rectum, or by stimulating the nerve endings in the rectal mucosa. The best results can be obtained by inserting the suppository 30 minutes before the client's usual defecation time or when the peristaltic action is greatest, such as after breakfast.

TABLE 49–3 Types of Laxatives

Type	Action	Examples	Pertinent Teaching Information
Bulk forming	Increases the fluid, gaseous, or solid bulk in the intestines.	Psyllium hydrophilic mucilloid (Metamucil), methylcellulose (Citrucel)	May take 12 or more hours to act. Sufficient fluid must be taken. Safe for long-term use.
Osmotic/saline	Draws water into the intestine by osmosis, distends bowel, and stimulates peristalsis. Almost no water or electrolytes are absorbed as solution moves through the intestines and the large fluid volume flushes feces from the colon (Daniels & Schmelzer, 2013).	Four major types of osmotic laxatives: lactulose, sodium phosphate (tablet form only requiring a prescription; OsmoPrep, Visicol), magnesium salts (magnesium citrate), and sodium sulfate (SUPREP) Electrolyte-free polyethylene glycol 3350 (PEG 3350) (MiraLAX) PEG-ES (GoLYTELY; NuLYTELY)	May be rapid acting. Can cause fluid and electrolyte imbalance, particularly in older people and children with cardiac and renal disease. Use caution when giving to older adults. A laxative that is helpful in the treatment of constipation. It is a powder that is tasteless when mixed in a flavored liquid such as juice. Used for cleaning of the colon before colonoscopy. Requires drinking a large volume (4 L), which may be difficult for clients to tolerate. Has an unpleasant taste.
Stimulant/irritant	Irritates the intestinal mucosa or stimulates nerve endings in the wall of the intestine, causing rapid propulsion of the contents.	Bisacodyl (Dulcolax, Correctol), senna (Senokot, Ex-Lax), cascara, castor oil	Acts more quickly than bulk-forming agents. Fluid is passed with the feces. May cause cramps. Use only for short periods of time. Prolonged use may cause fluid and electrolyte imbalance.
Stool softener or surfactant	Softens and delays the drying of the stool; causes more water and fat to be absorbed into the stool.	Docusate sodium (Colace) Docusate calcium (Surfak)	Slow-acting; may take several days.
Lubricant	Lubricates the stool and colon mucosa.	Mineral oil (Haley's M-O)	Prolonged use inhibits the absorption of some fat-soluble vitamins.

BOX 49–2 Guidelines for Using Antidiarrheal Medications

- If the diarrhea persists for more than 3 or 4 days, determine the underlying cause. Using a medication such as an opiate when the cause is an infection, toxin, or poison may prolong diarrhea.
- Long-term use of OTC medications (e.g., loperamide hydrochloride [Imodium]) can produce dependence.
- Some antidiarrheal agents can cause drowsiness (e.g., diphenoxylate hydrochloride [Lomotil]) and should not be used when driving an automobile or running machinery.
- Kaolin-pectin preparations (e.g., Kaopectate) may absorb nutrients.
- Bulk laxatives and other absorbents may be used to help bind toxins and absorb excess bowel liquid.
- Bismuth preparations (e.g., Pepto-Bismol), often used to treat "traveler's diarrhea," may contain aspirin and should not be given to children and teenagers with chickenpox, influenza, and other viral infections.

Antidiarrheal Medications

These medications slow the motility of the intestine or absorb excess fluid in the intestine. Guidelines for using antidiarrheals are shown in Box 49–2.

Antiflatulent Medications

Antiflatulent agents such as simethicone do not decrease the formation of flatus but they do coalesce the gas bubbles and facilitate their passage by belching through the mouth or expulsion through the anus. A combination of simethicone and loperamide (Imodium Advanced) is effective in relieving abdominal bloating and gas associated with acute diarrhea; however, no convincing evidence has been shown for common flatulence ("Relief from intestinal gas," 2013). **Carminatives** are herbal oils known to act as agents that help expel gas from the stomach and intestines. Suppositories can also be given to relieve flatus by increasing intestinal motility.

Decreasing Flatulence

There are a number of ways to reduce or expel flatus, including exercise, moving in bed, ambulation, and avoiding gas-producing foods. Movement stimulates peristalsis and the escape of flatus and reabsorption of gases in the intestinal capillaries.

Certain medication can decrease flatulence. Probiotics may be helpful in the management of flatulence and bloating. Because each probiotic is a different mixture of bacteria, they need to be treated as different medications. Recent studies have shown different probiotics to be helpful for various gastrointestinal disorders (Lacy, Gabbard, & Crowell, 2011). Bismuth subsalicylate (Pepto-Bismol) can be effective; however, it should not be used as a continuous treatment because it contains aspirin and could cause salicylate toxicity. Alpha-galactosidase (Beano) is effective for reducing flatulence caused by eating fermentable carbohydrates (e.g., beans, bran, fruit).

Administering Enemas

An **enema** is a solution introduced into the rectum and large intestine. The action of an enema is to distend the intestine and sometimes to irritate the intestinal mucosa, thereby increasing peristalsis and the excretion of feces and flatus. The enema solution should be at 37.7°C (100°F) because a solution that is too cold or too hot is uncomfortable and causes cramping. Enemas are classified into four groups: cleansing, carminative, retention, and return-flow enemas.

Cleansing Enema

Cleansing enemas are intended to remove feces. They are given chiefly to:

- Prevent the escape of feces during surgery.
- Prepare the intestine for certain diagnostic tests such as x-ray or visualization tests (e.g., colonoscopy).
- Remove feces in instances of constipation or impaction.

Cleansing enemas use a variety of solutions. Table 49–4 lists commonly used solutions.

Hypertonic solutions exert osmotic pressure, which draws fluid from the interstitial space into the colon. The increased volume in the colon stimulates peristalsis and hence defecation. A commonly used hypertonic enema is the commercially prepared Fleet phosphate enema. Hypotonic solutions (e.g., tap water) exert a lower osmotic pressure than the surrounding interstitial fluid, causing water to move from the colon into the interstitial space. Before the water moves from the colon, it stimulates peristalsis and defecation. Because the water moves out of the colon, the tap water enema should not be repeated because of the danger of circulatory

TABLE 49–4 Commonly Used Enema Solutions

Solution	Constituents	Action	Time to Take Effect	Adverse Effects
Hypertonic	90–120 mL of solution (e.g., sodium phosphate [Fleet])	Draws water into the colon.	5–10 min	Retention of sodium
Hypotonic	500–1,000 mL of tap water	Distends colon, stimulates peristalsis, and softens feces.	15–20 min	Fluid and electrolyte imbalance; water intoxication
Isotonic	500–1,000 mL of normal saline	Distends colon, stimulates peristalsis, and softens feces.	15–20 min	Possible sodium retention
Soapsuds	500–1,000 mL (3–5 mL soap to 1,000 mL water)	Irritates mucosa, distends colon.	10–15 min	Irritates and may damage mucosa
Oil (mineral, olive, cottonseed)	90–120 mL	Lubricates the feces and the colonic mucosa.	0.5–3 h	

overload when the water moves from the interstitial space into the circulatory system.

SAFETY ALERT! SAFETY

Special precautions must be used to alert nurses to possible contraindications when Fleet enemas are prescribed for clients with renal failure. The label on the Fleet enema warns that using more than one enema every 24 hours can be harmful. Clients and family may underestimate the risks for a client with decreased renal function because a Fleet enema can be obtained over the counter in stores (Cohen, 2012).

Isotonic solutions, such as physiological (normal) saline, are considered the safest enema solutions to use. They exert the same osmotic pressure as the interstitial fluid surrounding the colon. Therefore, there is no fluid movement into or out of the colon. The instilled volume of saline in the colon stimulates peristalsis. Soapsuds enemas stimulate peristalsis by increasing the volume in the colon and irritating the mucosa. Only pure soap (i.e., Castile soap) should be used in order to minimize mucosa irritation.

Some enemas are large volume (i.e., 500 to 1,000 mL) for an adult and others are small volume (90 to 120 mL), including hypertonic solutions. The amount of solution administered for a high-volume enema will depend on the age and medical condition of the individual. For example, clients with certain cardiac or renal diseases would be adversely affected by significant fluid retention that might result from large-volume hypotonic enemas.

Cleansing enemas may also be described as high or low. A high enema is given to cleanse as much of the colon as possible. The client changes from the left lateral position to the dorsal recumbent position and then to the right lateral position during administration so that the solution can follow the large intestine. The low enema is used to clean the rectum and sigmoid colon only. The client maintains a left lateral position during administration.

The force of flow of the solution is governed by (a) the height of the solution container, (b) size of the tubing, (c) viscosity of the fluid, and (d) resistance of the rectum. The higher the solution container is held above the rectum, the faster the flow and the greater the force (pressure) in the rectum. During most adult enemas, the solution container should be no higher than 30 cm (12 in.) above the rectum. During a high cleansing enema, the solution container is usually held 30 to 49 cm (12 to 18 in.) above the rectum because the fluid is instilled farther to clean the entire bowel.

Carminative Enema

A carminative enema is given primarily to expel flatus. The solution instilled into the rectum releases gas, which in turn distends the rectum and the colon, thus stimulating peristalsis. For an adult, 60 to 80 mL of fluid is instilled.

Retention Enema

A retention enema introduces oil or medication into the rectum and sigmoid colon. The liquid is retained for a relatively long period (e.g., 1 to 3 hours). An oil retention enema acts to soften the feces and to lubricate the rectum and anal canal, thus facilitating passage of the feces. Antibiotic enemas are used to treat infections locally, anthelmintic enemas to kill helminths such as worms and intestinal parasites, and nutritive enemas to administer fluids and nutrients to the rectum.

Return-Flow Enema

A return-flow enema, also called a Harris flush, is occasionally used to expel flatus. Alternating flow of 100 to 200 mL of fluid into and out of the rectum and sigmoid colon stimulates peristalsis. This process is repeated five or six times until the flatus is expelled and abdominal distention is relieved.

From a holistic perspective, it is important for the nurse to remember that clients may perceive this type of procedure as a significant violation of personal space. Cultural sensitivity pertaining to personal space, gender of the caregiver, and the potential meaning of the structures and fluids found in this private area of the body needs to be considered. Keep in mind the client's potential discomfort with the gender of the caregiver and try to accommodate the client's preferences whenever possible. When it is not possible to honor the client's wishes, respectfully explain the circumstances. A gentle, matter-of-fact approach is often most helpful. Also, insertion of anything foreign into an orifice of a client's body may trigger memories of past abuse. Monitor the client for emotional responses to the procedure (both subtle and extreme) because this could indicate a history of trauma and require appropriate referral for counseling. Simply asking the client to describe the experience will give the nurse more information for possible referral.

Skill 49–1 describes how to administer an enema.

CLINICAL ALERT!

Some clients may wish to administer their own enemas. If this is appropriate, the nurse validates the client's knowledge of correct technique and assists as needed.

Administering an Enema

SKILL 49–1

PURPOSE

- To achieve one or more of the following actions: cleansing, carminative, retention, or return-flow

ASSESSMENT

Assess

- When the client last had a bowel movement and the amount, color, and consistency of the feces
- Presence of abdominal distention
- Whether the client has sphincter control
- Whether the client can use a toilet or commode or must remain in bed and use a bedpan

Continued on page 1228

Administering an Enema—*continued*

SKILL 49–1

PLANNING

Before administering an enema, determine that there is a primary care provider's order. At some agencies, a primary care provider must order the type of enema and the time to give it, for example, the morning of an examination. At other agencies, enemas are given at the nurse's discretion (i.e., as necessary on a prn order). In addition, determine the presence of kidney or cardiac disease that contraindicates the use of a hypotonic or hypertonic solution.

DELEGATION

Administration of some enemas may be delegated to unlicensed assistive personnel (UAP). However, the nurse must ensure the personnel are competent in the use of standard precautions. Abnormal findings such as inability to insert the rectal tip, client inability to retain the solution, or unusual return from the enema must be validated and interpreted by the nurse.

Equipment

- Disposable linen-saver pad
- Bath blanket
- Bedpan or commode
- Clean gloves
- Water-soluble lubricant if tubing not prelubricated
- Paper towel

Large-Volume Enema

- Solution container with tubing of correct size and tubing clamp
- Correct solution, amount, and temperature

Small-Volume Enema

- Prepackaged container of enema solution with lubricated tip

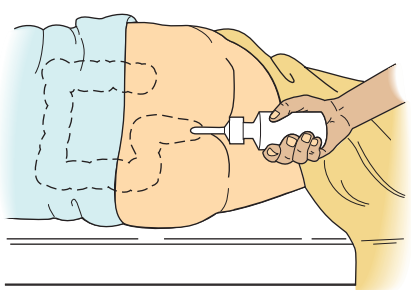
IMPLEMENTATION

Preparation

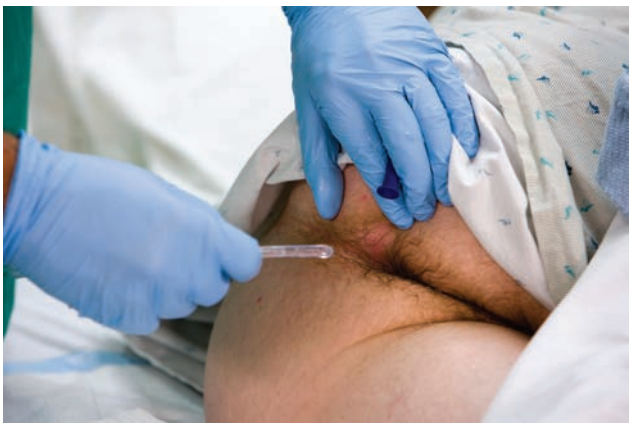
- Lubricate about 5 cm (2 in.) of the rectal tube (some commercially prepared enema sets already have lubricated nozzles). **Rationale:** *Lubrication facilitates insertion through the sphincter and minimizes trauma.*
- Run some solution through the connecting tubing of a large-volume enema set and the rectal tube to expel any air in the tubing, then close the clamp. **Rationale:** *Air instilled into the rectum, although not harmful, causes unnecessary distention.*

Performance

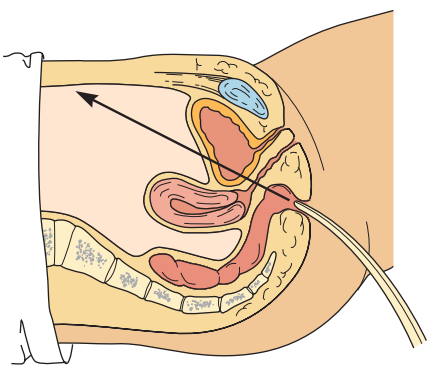
1. Prior to performing the procedure, introduce self and verify the client's identity using agency protocol. Explain to the client what you are going to do, why it is necessary, and how he or she can participate. Discuss how the results will be used in planning further care or treatments. Indicate that the client may experience a feeling of fullness while the solution is being administered. Explain the need to hold the solution as long as possible.
2. Perform hand hygiene and observe other appropriate infection prevention procedures.
3. Apply clean gloves.
4. Provide for client privacy.
5. Assist the adult client to a left lateral position, with the right leg as acutely flexed as possible ❶, with the linen-saver pad under the buttocks. **Rationale:** *This position facilitates the flow of solution by gravity into the sigmoid and descending colon, which are on the left side. Having the right leg acutely flexed provides for adequate exposure of the anus.*
6. Insert the enema tube.
   - For clients in the left lateral position, lift the upper buttock. ❷ **Rationale:** *This ensures good visualization of the anus.*



❶ Assuming a left lateral position for an enema. Note the commercially prepared enema.



❷ Inserting the enema tube.



❸ Inserting the enema tube following the direction of the rectum.

   - Insert the tube smoothly and slowly into the rectum, directing it toward the umbilicus. ❸ **Rationale:** *The angle follows the normal contour of the rectum. Slow insertion prevents spasm of the sphincter.*
   - Insert the tube 7 to 10 cm (3 to 4 in.). **Rationale:** *Because the anal canal is about 2.5 to 5 cm (1 to 2 in.) long in the adult, insertion to this point places the tip of the tube beyond the anal sphincter into the rectum.*

Administering an Enema—*continued*

- If resistance is encountered at the internal sphincter, ask the client to take a deep breath, then run a small amount of solution through the tube. **Rationale:** *This relaxes the internal anal sphincter.*
- Never force tube or solution entry. If instilling a small amount of solution does not permit the tube to be advanced or the solution to freely flow, withdraw the tube. Check for any stool that may have blocked the tube during insertion. If present, flush it and retry the procedure. You may also perform a digital rectal examination to determine if there is an impaction or other mechanical blockage. If resistance persists, end the procedure and report the resistance to the primary care provider and nurse in charge.

7. Slowly administer the enema solution.

- Raise the solution container, and open the clamp to allow fluid flow.

or

- Compress a pliable container by hand.
- During most low enemas, hold or hang the solution container no higher than 30 cm (12 in.) above the rectum. **Rationale:** *The higher the solution container is held above the rectum, the faster the flow and the greater the force (pressure) in the rectum.* During a high enema, hang the solution container about ,30 to 49 cm (12 to18 in.). **Rationale:** *Fluid must be instilled farther for a high enema to clean the entire bowel.* See agency protocol.
- Administer the fluid slowly. If the client complains of fullness or pain, lower the container or use the clamp to stop the flow for 30 seconds, and then restart the flow at a slower rate. **Rationale:** *Administering the enema slowly and stopping the flow momentarily decreases the likelihood of intestinal spasm and premature ejection of the solution.*
- If you are using a plastic commercial container, roll it up as the fluid is instilled. This prevents subsequent suctioning of the solution. 4
- After all the solution has been instilled or when the client cannot hold any more and feels the desire to defecate (the urge to defecate usually indicates that sufficient fluid has been administered), close the clamp, and remove the enema tube from the anus.
- Place the enema tube in a disposable towel as you withdraw it.

8. Encourage the client to retain the enema.

- Ask the client to remain lying down. **Rationale:** *It is easier for the client to retain the enema when lying down than when sitting or standing, because gravity promotes drainage and peristalsis.*
- Request that the client retain the solution for the appropriate amount of time, for example, 5 to 10 minutes for a cleansing enema or at least 30 minutes for a retention enema.

9. Assist the client to defecate.

- Assist the client to a sitting position on the bedpan, commode, or toilet. A sitting position facilitates the act of defecation.
- Ask the client who is using the toilet not to flush it. The nurse needs to observe the feces.

4 Rolling up a commercial enema container.

- If a specimen of feces is required, ask the client to use a bedpan or commode.
- Remove and discard gloves.
- Perform hand hygiene.

10. Document the type and volume, if appropriate, of enema given. Describe the results.

SAMPLE DOCUMENTATION

8/2/2015 1000. States last BM five days ago. Abdomen distended and firm. Bowel sounds hypoactive. Fleet enema, given per order, resulted in large amount of firm brown stool. States he "feels better." ——————————————————— M. Lopez, RN

Variation: Administering an Enema to an Incontinent Client

Occasionally a nurse needs to administer an enema to a client who is unable to control the external sphincter muscle and thus cannot retain the enema solution for even a few minutes. In that case, after the enema tube is inserted, the client assumes a supine position on a bedpan. The head of the bed can be elevated slightly, to 30 degrees if necessary for easier breathing, and pillows used to support the client's head and back.

Variation: Administering a Return-Flow Enema

For a return-flow enema, the solution (100 to 200 mL for an adult) is instilled into the client's rectum and sigmoid colon. Then the solution container is lowered so that the fluid flows back out through the rectal tube into the container, pulling the flatus with it. The inflow–outflow process is repeated five or six times (to stimulate peristalsis and the expulsion of flatus), and the solution is replaced several times during the procedure if it becomes thick with feces.

Document the type of solution; length of time the solution was retained; the amount, color, and consistency of the returns; and the relief of flatus and abdominal distention in the client record using forms or checklists supplemented by narrative notes when appropriate.

EVALUATION

- Perform a detailed follow-up based on findings that deviated from expected or normal for the client. Relate findings to previous assessment data if available. Report significant deviations from expected to the primary care provider.

LIFESPAN CONSIDERATIONS Administering an Enema

INFANTS/CHILDREN

- Provide a careful explanation to the parents and child before the procedure. An enema is an intrusive procedure and therefore threatening to the child.
- The enema solution should be isotonic (usually normal saline). Some hypertonic commercial solutions (e.g., Fleet phosphate enema) can lead to hypovolemia and electrolyte imbalances. In addition, the osmotic effect of the enema may produce diarrhea and subsequent metabolic acidosis.
- Infants and small children do not exhibit sphincter control and need to be assisted in retaining the enema. The nurse administers the enema while the infant or child is lying with the buttocks over the bedpan, and the nurse firmly presses the buttocks together to prevent the immediate expulsion of the solution. Older children can usually hold the solution if they understand what to do and are not required to hold it for too long a period. It may be necessary to ensure that the bathroom is available for an ambulatory child before starting the procedure or to have a bedpan ready.
- Enema temperature should be 37.7°C (100°F) unless otherwise ordered.
- Large-volume enemas consist of 50 to 200 mL in children less than 18 months old; 200 to 300 mL in children 18 months to 5 years; and 300 to 500 mL in children 5 to 12 years old.
- For infants and small children, the dorsal recumbent position is frequently used. Position them on a small padded bedpan with support for the back and head. Secure the legs by placing a diaper under the bedpan and then over and around the thighs. Place the underpad under the client's buttocks to protect the bed linen, and drape the client with the bath blanket.
- Insert the tube 5 to 7.5 cm (2 to 3 in.) in the child and only 2.5 to 3.75 cm (1 to 1.5 in.) in the infant.
- For children, lower the height of the solution container appropriately for the age of the child. See agency protocol.
- To assist a small child in retaining the solution, apply firm pressure over the anus with tissue wipes, or firmly press the buttocks together.

OLDER ADULTS

- Older adults may fatigue easily.
- Older adults may be more susceptible to fluid and electrolyte imbalances. Use tap water enemas with great caution.
- Monitor the client's tolerance during the procedure, watching for vagal episodes (e.g., slow pulse) and dysrhythmias.
- Protect older adults' skin from prolonged exposure to moisture.
- Assist older clients with perineal care as indicated.

Home Care Considerations Administering an Enema

PATIENT-CENTERED CARE

Teach the caregiver or client the following:

- To make a saline solution, mix 1 teaspoon of table salt with 500 mL of tap water.
- Use enemas only as directed. Do not rely on them for regular bowel evacuation.
- Prior to administration, make sure a bedpan, commode, or toilet is nearby.

Digital Removal of a Fecal Impaction

Digital removal involves breaking up the fecal mass digitally and removing it in portions. Because the bowel mucosa can be injured during this procedure, some agencies restrict and specify the personnel permitted to conduct digital disimpactions. Rectal stimulation is also contraindicated for some people because it may cause an excessive vagal response resulting in cardiac arrhythmia. Before disimpaction it is suggested an oil retention enema be given and held for 30 minutes. After a disimpaction, the nurse can use various interventions to remove remaining feces, such as a cleansing enema or the insertion of a suppository.

CLINICAL ALERT!

Clients with a history of cardiac disease and/or dysrhythmias may be at risk with digital stimulation to remove an impaction. If in doubt, the nurse should check with the primary care provider before performing the procedure.

Because manual removal of an impaction can be painful, the nurse may use, if the agency permits, 1 to 2 mL of lidocaine (Xylocaine) gel on a gloved finger inserted into the anal canal as far as the nurse can reach. The lidocaine will anesthetize the anal canal and rectum and should be inserted 5 minutes before the disimpaction.

Disimpacting the client requires great sensitivity and a caring, yet matter-of-fact, approach. Be aware of personal facial expressions or anything that may convey distaste or disgust to the client. When dealing with fecal matter, many clients feel a sense of shame that relates to childhood experiences that may have been traumatic in some way. Control issues may also be triggered, and can manifest in many ways. Confusion and negative feelings are easily triggered in both client and nurse. Awareness and an ability to discuss these issues with a client, when appropriate, are important to providing sensitive care. Self-awareness will help the nurse be more therapeutically present to the client.

For digital removal of a fecal impaction:

1. If indicated, obtain assistance from a second person who can comfort the client during the procedure.
2. Ask the client to assume a right or left side-lying position, with the knees flexed and the back toward the nurse. When the person lies on the right side, the sigmoid colon is uppermost; thus, gravity can aid removal of the feces. Positioning on the left side allows easier access to the sigmoid colon.
3. Place a disposable absorbent pad under the client's buttocks and a bedpan nearby to receive stool.
4. Drape the client for comfort and to avoid unnecessary exposure of the body.
5. Apply clean gloves and liberally lubricate the gloved index finger.
6. Gently insert the index finger into the rectum and move the finger along the length of the rectum.
7. Loosen and dislodge stool by gently massaging around it. Break up stool by working the finger into the hardened mass, taking care to avoid injury to the mucosa of the rectum.
8. Carefully work stool downward to the end of the rectum and remove it in small pieces. Continue to remove as much fecal

material as possible. Periodically assess the client for signs of fatigue, such as facial pallor, diaphoresis, or change in pulse rate. Manual stimulation should be minimal.

9. Following disimpaction, assist the client to clean the anal area and buttocks. Then assist the client onto a bedpan or commode for a short time because digital stimulation of the rectum often induces the urge to defecate.

Bowel Training Programs

For clients who have chronic constipation, frequent impactions, or fecal incontinence, bowel training programs may be helpful. The program is based on factors within the client's control and is designed to help the client establish normal defecation. Such matters as food and fluid intake, exercise, and defecation habits are all considered. Before beginning such a program, clients must understand it and want to be involved. The major phases of the program are as follows:

- Determine the client's usual bowel habits and factors that help and hinder normal defecation.
- Design a plan with the client that includes the following:
  a. Fluid intake of about 2,500 to 3,000 mL/day
  b. Increase in fiber in the diet
  c. Intake of hot drinks, especially just before the usual defecation time
  d. Increase in exercise.
- Maintain the following daily routine for 2 to 3 weeks:
  a. Administer a cathartic suppository (e.g., Dulcolax) 30 minutes before the client's defecation time to stimulate peristalsis.
  b. When the client experiences the urge to defecate, assist the client to the toilet or commode or onto a bedpan. Note the length of time between the insertion of the suppository and the urge to defecate.
  c. Provide the client with privacy for defecation and a time limit; 30 to 40 minutes is usually sufficient.
  d. Teach the client to lean forward at the hips, to apply pressure on the abdomen with the hands, and to bear down for defecation. These measures increase pressure on the colon. Straining should be avoided because it can cause hemorrhoids.
- Provide positive feedback when the client successfully defecates. Refrain from negative feedback if the client fails to defecate.
- Offer encouragement to the client and convey that patience is often required. Many clients require weeks or months of training to achieve success.

Fecal Incontinence Pouch

To collect and contain large volumes of liquid feces, the nurse may place a fecal incontinence collector pouch around the anal area (Figure 49–13 ■). The purpose of the pouch is to prevent progressive perianal skin irritation and breakdown and frequent linen changes necessitated by incontinence. In many agencies, the pouch is replacing the traditional approach to this problem; that is, inserting a large Foley catheter into the client's rectum and inflating the balloon to keep it in place—a practice that may damage the rectal sphincter and rectal mucosa. A rectal catheter also increases peristalsis and incontinence by stimulating sensory nerve fibers in the rectum.

A fecal collector is secured around the anal opening and may or may not be attached to drainage. Pouches are best applied before the perianal skin becomes excoriated. If perianal skin excoriation is present, the nurse either (a) applies a dimethicone-based moisture-barrier cream or alcohol-free barrier film to the skin to protect it from feces until it heals and then applies the pouch, or (b) applies a skin barrier or hydrocolloid barrier underneath the pouch to achieve the best possible seal.

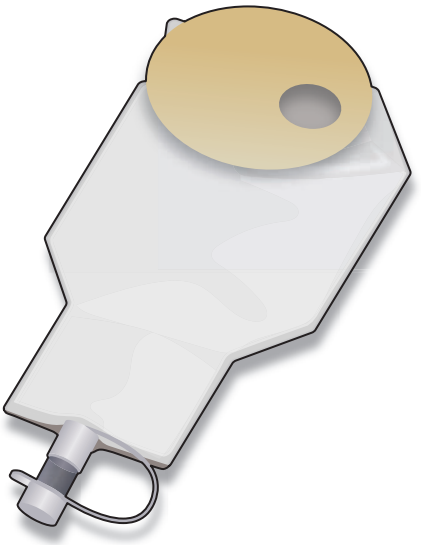


Figure 49–13 ■ A drainable fecal collector pouch.

Nursing responsibilities for clients with a rectal pouch include (a) regular assessment and documentation of the perianal skin status, (b) changing the bag every 72 hours or sooner if there is leakage, (c) maintaining the drainage system, and (d) providing explanations and support to the client and support people.

Some clients (e.g., post-stroke, post-trauma, quadriplegia, or paraplegia) may be treated for fecal incontinence with surgical repair of a damaged sphincter or an artificial bowel sphincter. The artificial sphincter consists of three parts: a cuff around the anal canal, a pressure-regulating balloon, and a pump that inflates the cuff (Figure 49–14 ■). The cuff is inflated to close the sphincter,

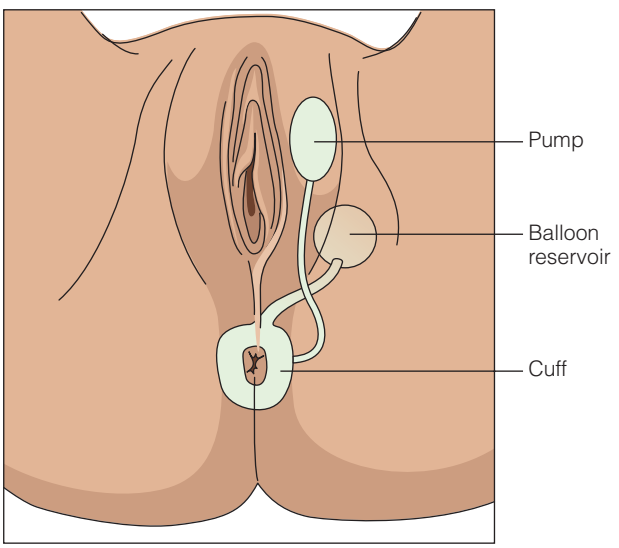


Figure 49–14 ■ Inflatable artificial sphincter.

maintaining continence. To have a bowel movement, the client deflates the cuff. The cuff automatically reinflates in 10 minutes. Management of this device is usually specific to the device; contact the manufacturing company for details.

Administering enemas and rectal medications may be harmful with this device in place. Ensure safety of these practices with the device instruction guide provided by the device manufacturer.

Ostomy Management

Clients with fecal diversions need considerable psychological support, instruction, and physical care. This section is limited to the nurse's physical interventions of stoma assessment, application of an appliance to collect feces and protect skin, and promotion of self-care. Many agencies have access to a wound ostomy continence nurse (WOCN) to assist these clients. If possible, clients should meet with the WOCN prior to the surgery to assist in the placement of the colostomy. National organizations (e.g., United Ostomy Associations of America) have support groups whose mission is to improve the quality of life of people who have, or will have, an ostomy. Members of local chapters of such an organization have been known to meet and visit with a client who has a new ostomy. It is common for a client with a new ostomy to feel frightened and alone. Talking with another person who has gone through a similar experience may help the client realize that he or she is not alone and others are willing to listen and help.

Stoma and Skin Care

Care of the stoma and skin is important for all clients who have ostomies. The fecal material from a colostomy or ileostomy is irritating to the peristomal skin. This is particularly true of stool from an ileostomy, which contains digestive enzymes. It is important to assess the peristomal skin for irritation each time the appliance is changed. Any irritation or skin breakdown needs to be treated immediately. The skin is kept clean by washing off any excretion and drying thoroughly.

An ostomy appliance should protect the skin, collect stool, and control odor. The appliance consists of a skin barrier and a pouch. Some clients may prefer to also wear an adjustable ostomy belt, which attaches to an ostomy pouch to hold the pouch firmly in place (Figure 49–15 ■).

Appliances can be one piece where the skin barrier is already attached to the pouch (Figure 49–16 *A* ■), or an appliance can consist of two pieces: a separate pouch with a flange and a separate skin barrier with a flange where the pouch fastens to the barrier at the flange (Figure 49–16 *B*). The pouch can be removed without removing the skin barrier when using a two-piece appliance. Pouches can be closed or drainable (Figure 49–17 ■). A drainable pouch usually has a clip where the end of the pouch is folded over the clamp and clipped (Figure 49–18 ■). Newer drainable pouches have an integrated closure system instead of a clamp. The client folds up the end of the pouch three times and presses firmly to seal the pouch. Drainable pouches are usually used by people who need to empty the pouch more than twice a day.

Closed pouches are often used by people who have a regular stoma discharge (e.g., sigmoid colostomy) and only have to empty the pouch 1 or 2 times a day. Some people find it easier to change a closed pouch than emptying a drainable pouch, which requires some dexterity.

Odor control is essential to clients' self-esteem. As soon as clients are ambulatory, they can learn to work with the ostomy in the bathroom to avoid odors at the bedside. Selecting the appropriate kind of appliance promotes odor control. An intact appliance contains odors. Most pouches contain odor-barrier material. Some pouches also have a pouch filter that allows gas out of the pouch but not the odor.

Ostomy appliances can provide a leakproof seal for about 3 to 7 days (Avent, 2012). The pouch should be changed on a routine basis,

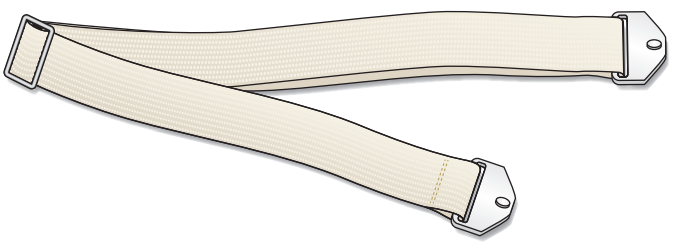


Figure 49–15 ■ Adjustable ostomy belt.

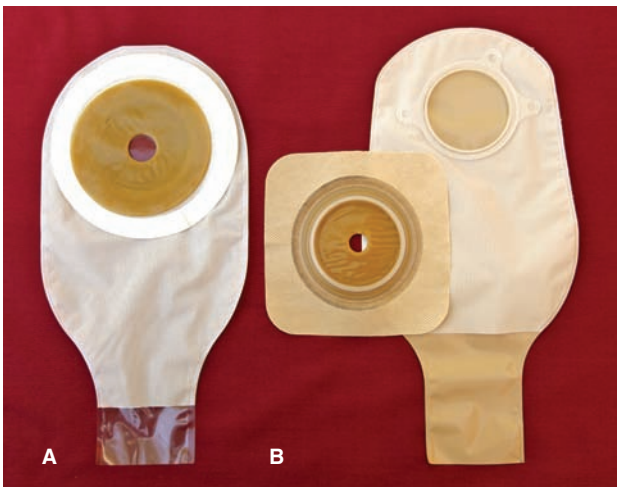


Figure 49–16 ■ *A,* A one-piece ostomy appliance or pouching system; *B,* a two-piece ostomy appliance or pouching system.

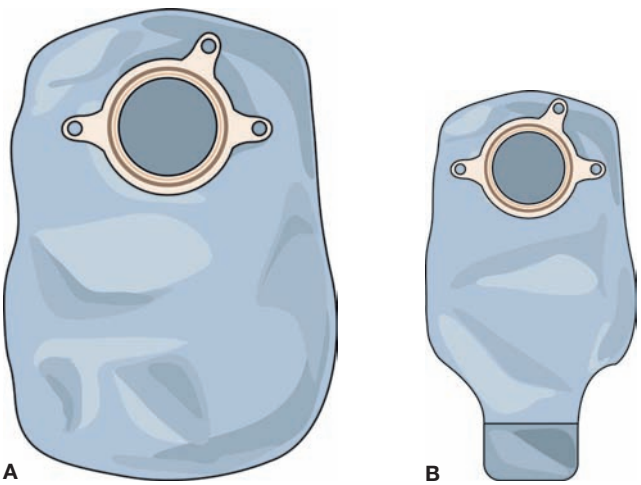


Figure 49–17 ■ *A,* A closed pouch; *B,* a drainable pouch.

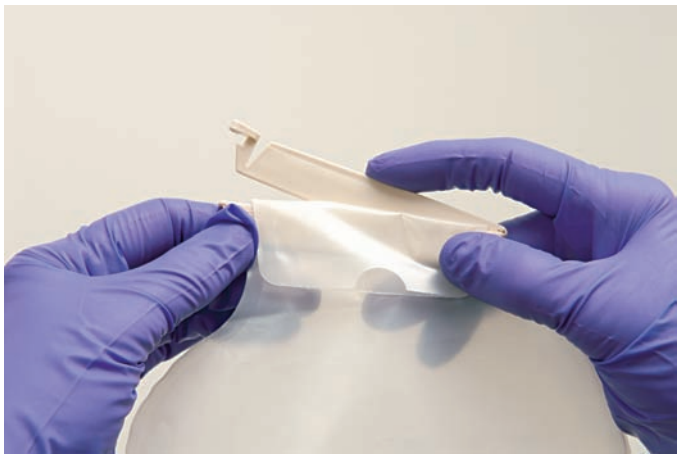


Figure 49–18 ■ Applying a pouch clamp.

before leakage occurs. The most common routine for changing the appliance is twice weekly (Hollister, Inc., 2011). Some manufacturers recommend removing the pouch and skin barrier twice a week to clean and inspect the peristomal skin unless stool leaks onto the peristomal skin, necessitating a change. If the skin is erythematous, eroded, denuded, or ulcerated, the pouch should be changed every 24 to 48 hours to allow appropriate treatment of the skin. More frequent changes are recommended if the client complains of pain or discomfort.

The type of ostomy and amount of output influence how often the pouch is emptied. The pouch is emptied when it is one third to one half full. If the pouch overfills, it can cause separation of the skin barrier from the skin and allow stool to come in contact with the skin. This results in the entire appliance needing to be removed and a new one applied.

Skill 49–2 explains how to change a bowel diversion ostomy appliance.

Changing a Bowel Diversion Ostomy Appliance

SKILL 49–2

PURPOSES

- To assess and care for the peristomal skin
- To collect stool for assessment of the amount and type of output
- To minimize odors for the client's comfort and self-esteem

ASSESSMENT

Determine the following:

- The type of ostomy and its placement on the abdomen. Surgeons often draw diagrams when there are two stomas. If there is more than one stoma, it is important to confirm which is the functioning stoma.
- The type and size of appliance currently used and the special barrier substance applied to the skin, according to the nursing care plan.

Assess

- *Stoma color:* The stoma should appear red, similar in color to the mucosal lining of the inner cheek and slightly moist. Very pale or darker-colored stomas with a dusky bluish or purplish hue indicate impaired blood circulation to the area. Notify the surgeon immediately.
- *Stoma size and shape:* Most stomas protrude slightly from the abdomen. New stomas normally appear swollen, but swelling generally decreases over 2 or 3 weeks or for as long as 6 weeks. Failure of swelling to recede may indicate a problem, for example, blockage.
- *Stomal bleeding:* Slight bleeding initially when the stoma is touched is normal, but other bleeding should be reported.
- *Status of peristomal skin:* Any redness and irritation of the peristomal skin—the 5 to 13 cm (2 to 5 in.) of skin surrounding the stoma—should be noted. Transient redness after removal of adhesive is normal.
- *Amount and type of feces:* Assess the amount, color, odor, and consistency. Inspect for abnormalities, such as pus or blood.
- *Complaints:* Complaints of burning sensation under the skin barrier may indicate skin breakdown. The presence of abdominal discomfort and/or distention also needs to be determined.
- Learning needs of the client and family members regarding the ostomy and self-care.
- The client's emotional status, especially strategies used to cope with the body image changes and the ostomy.

PLANNING

Review features of the appliance to ensure that all parts are present and functioning correctly.

DELEGATION

Care of a *new* ostomy is not delegated to UAP. However, aspects of ostomy function are observed during usual care and may be recorded by a WOCN in addition to the unit nurse. Abnormal findings must be validated and interpreted by the nurse. In some agencies, UAP may remove and replace *well-established* ostomy appliances.

Equipment

- Clean gloves
- Bedpan
- Moisture-proof bag (for disposable pouches)
- Cleaning materials, including warm water, mild soap (optional), washcloth, towel
- Tissue or gauze pad
- Skin barrier (optional)
- Stoma measuring guide
- Pen or pencil and scissors
- New ostomy pouch with optional belt
- Tail closure clamp
- Deodorant for pouch (optional)

Continued on page 1234

Changing a Bowel Diversion Ostomy Appliance—*continued*

SKILL 49–2

IMPLEMENTATION

Preparation

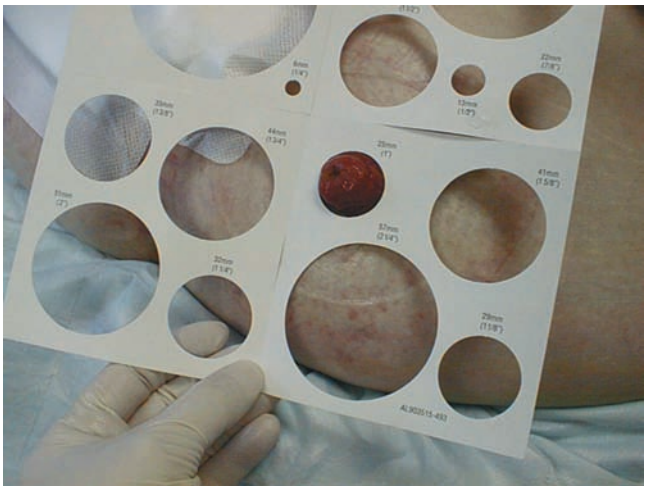
1. Determine the need for an appliance change.
   - Assess the used appliance for leakage of stool. **Rationale:** *Stool can irritate the peristomal skin.*
   - Ask the client about any discomfort at or around the stoma. **Rationale:** *A burning sensation may indicate breakdown beneath the faceplate of the pouch.*
   - Assess the fullness of the pouch. **Rationale:** *The weight of an overly full bag may loosen the skin barrier and separate it from the skin, causing the stool to leak and irritate the peristomal skin.*
2. If there is pouch leakage or discomfort at or around the stoma, change the appliance.
3. Select an appropriate time to change the appliance.
   - Avoid times close to meal or visiting hours. **Rationale:** *Ostomy odor and stool may reduce appetite or embarrass the client.*
   - Avoid times immediately after meals or the administration of any medications that may stimulate bowel evacuation. **Rationale:** *It is best to change the pouch when drainage is least likely to occur.*
   - The best time to change a pouching system is first thing in the morning or 2 to 4 hours after meals, when the bowel is least active (Scemons, 2013, p. 37).

Performance

1. Prior to performing the procedure, introduce self and verify the client's identity using agency protocol. Explain to the client what you are going to do, why it is necessary, and how he or she can participate. Discuss how the results will be used in planning further care or treatments. Changing an ostomy appliance should not cause discomfort, but it may be distasteful to the client. Communicate acceptance and support to the client. It is important to change the appliance competently and quickly. Include support people as appropriate.
2. Perform hand hygiene and observe other appropriate infection prevention procedures.
3. Apply clean gloves.
4. Provide for client privacy preferably in the bathroom, where clients can learn to deal with the ostomy as they would at home.
5. Assist the client to a comfortable sitting or lying position in bed or preferably a sitting or standing position in the bathroom. **Rationale:** *Lying or standing positions may facilitate smoother pouch application, that is, avoid wrinkles.*
6. Unfasten the belt if the client is wearing one.
7. Empty the pouch and remove the ostomy skin barrier.
   - Empty the contents of a drainable pouch through the bottom opening into a bedpan or toilet. **Rationale:** *Emptying before removing the pouch prevents spillage of stool onto the client's skin.*
   - If the pouch uses a clamp, do not throw it away because it can be reused.
   - Assess the consistency, color, and amount of stool.
   - Peel the skin barrier off slowly, beginning at the top and working downward, while holding the client's skin taut. **Rationale:** *Holding the skin taut minimizes client discomfort and prevents abrasion of the skin.*
   - Discard the disposable pouch in a moisture-proof bag.
8. Clean and dry the peristomal skin and stoma.
   - Use toilet tissue to remove excess stool.
   - Use warm water, mild soap (optional), and a washcloth to clean the skin and stoma. ❶ Check agency practice on the use of soap. **Rationale:** *Soap is sometimes not advised because it can be irritating to the skin.* If soap is allowed, do not use deodorant or moisturizing soaps. **Rationale:** *They may interfere with the adhesives in the skin barrier.*

❶ Cleaning the skin.

Courtesy of Cory Patrick Hartley, RN.



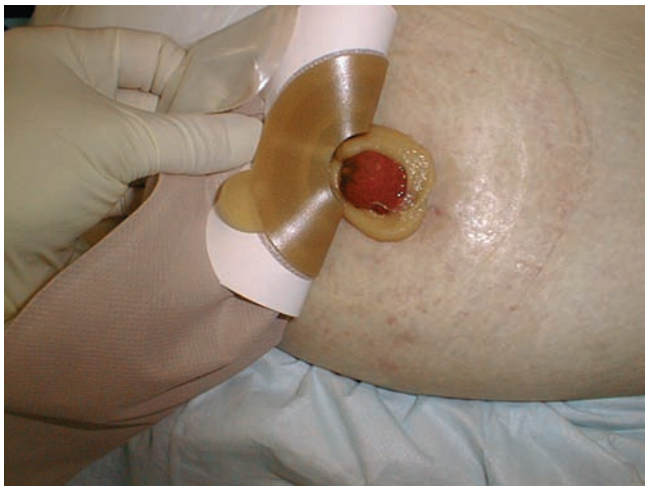
❷ A guide for measuring the stoma.

Courtesy of Cory Patrick Hartley, RN.

   - Dry the area thoroughly by patting with a towel. **Rationale:** *Excess rubbing can abrade the skin.*
9. Assess the stoma and peristomal skin.
   - Inspect the stoma for color, size, shape, and bleeding.
   - Inspect the peristomal skin for any redness, ulceration, or irritation. Transient redness after the removal of adhesive is normal.
10. Place a piece of tissue or gauze over the stoma, and change it as needed. **Rationale:** *This absorbs any seepage from the stoma while the ostomy appliance is being changed.*
11. Prepare and apply the skin barrier (peristomal seal).
    - Use the guide ❷ to measure the size of the stoma.
    - On the backing of the skin barrier, trace a circle the same size as the stomal opening.
    - Cut out the traced stoma pattern to make an opening in the skin barrier. ❸ Make the opening no more than 1/8 inch larger than the stoma (Piras & Hurley, 2011). **Rationale:** *This allows space for the stoma to expand slightly when functioning and minimizes the risk of stool contacting peristomal skin.*
    - Remove the backing to expose the sticky adhesive side. The backing can be saved and used as a pattern when making an opening for future skin barriers.

Changing a Bowel Diversion Ostomy Appliance—*continued*

3 The nurse is making a stoma opening on a disposable one-piece pouch.



4 Centering the skin barrier over the stoma.

Courtesy of Cory Patrick Hartley, RN.

5 Pressing the skin barrier of a disposable one-piece pouch for 30 seconds to activate the adhesives in the skin barrier.

For a One-Piece Pouching System

- Center the one-piece skin barrier and pouch over the stoma, and gently press it onto the client's skin for 30 seconds. 4, 5 **Rationale:** *The heat and pressure help activate the adhesives in the skin barrier.*

For a Two-Piece Pouching System

- Center the skin barrier over the stoma and gently press it onto the client's skin for 30 seconds.
- Remove the tissue over the stoma before applying the pouch.
- Snap the pouch onto the flange or skin barrier wafer.
- For drainable pouches, close the pouch according to the manufacturer's directions.
- Remove and discard gloves. Perform hand hygiene.

12. Document the procedure in the client record using forms or checklists supplemented by narrative notes when appropriate.

Record pertinent assessments and interventions. Report any increase in stoma size, change in color indicative of circulatory impairment, and presence of skin irritation or erosion. Record on the client's chart discoloration of the stoma, the appearance of the peristomal skin, the amount and type of drainage, the client's reaction to the procedure, the client's experience with the ostomy, and skills learned by the client.

SAMPLE DOCUMENTATION

8/3/2015 0900 Colostomy bag changed. Moderate to large amount of semi-formed brown stool. Stoma reddish color. No redness or irritation around stoma. Client looked at stoma today and started asking questions as to how she will be able to change the pouch when she is home. Asked if she would like to do the next changing of the pouch. Stated "yes." ——————————————— G. Hsu, RN

Variation: Emptying a Drainable Pouch

- Empty the pouch when it is one third to one half full of stool or gas. **Rationale:** *Emptying before it is overfull helps avoid breaking the seal with the skin and stool then coming in contact with the skin.*
- While wearing gloves, hold the pouch outlet over a bedpan or toilet. Lift the lower edge up.
- Unclamp or unseal the pouch.
- Drain the pouch. Loosen feces from sides by moving fingers down the pouch.
- Clean the inside of the tail of the pouch with a tissue or a premoistened towelette.
- Apply the clamp or seal the pouch.
- Dispose of used supplies.
- Remove and discard gloves.
- Perform hand hygiene.
- Document the amount, consistency, and color of stool.

EVALUATION

- Relate findings to previous data if available. Adjust the teaching plan and nursing care plan as needed. Reinforce the teaching each time the care is performed. Encourage and support self-care as soon as possible because clients should be able to perform self-care by discharge. **Rationale:** *Client learning is facilitated by consistent nursing interventions.*
- Perform detailed follow-up based on findings that deviated from expected or normal for the client. Report significant deviations from normal to the primary care provider.

Home Care Considerations **Changing an Ostomy Appliance** PATIENT-CENTERED CARE

- Provide the client with the names and phone numbers of a WOCN, supply vendor, and other resource people to contact when needed. Provide pertinent Internet resources for information and support.
- Inform the client of signs to report to a health care provider (e.g., peristomal redness, skin breakdown, and changes in stomal color).
- Provide client and family education regarding care of the ostomy and appliance when traveling.
- Educate the client and family regarding infection control precautions, including proper disposal of used pouches since these cannot be flushed down a toilet.
- Younger clients may have special concerns about odor and appearance. Provide information about ostomy care and community support groups. A visit from someone who has had an ostomy under similar circumstances may be helpful.

Colostomy Irrigation

A colostomy irrigation, similar to an enema, is a form of stoma management used only for clients who have a sigmoid or descending colostomy. The purpose of irrigation is to distend the bowel sufficiently to stimulate peristalsis, which stimulates evacuation. When a regular evacuation pattern is achieved, the wearing of a colostomy pouch is unnecessary. Currently, colostomy irrigations are not routinely taught to most clients. Routine daily irrigations for control of the time of elimination ultimately become the client's decision. Some clients prefer to control the time of elimination through rigid dietary regulation and not be bothered with irrigations, which can take up to an hour to complete. When regulation by irrigation is chosen, it should be done at the same time each day. Control by irrigations also necessitates some control of the diet. For example, laxative foods that might cause an unexpected evacuation need to be avoided.

For most clients, a relatively small amount of fluid (300 to 500 mL) stimulates evacuation. For others, up to 1,000 mL may be needed because a colostomy has no sphincter and the fluid tends to return as it is instilled. This problem is reduced by the use of a cone on the irrigating catheter. The cone helps to hold the fluid within the bowel during the irrigation. Clients who choose to practice colostomy irrigation need to be motivated to master the procedure. In addition, good manual dexterity and eyesight, along with uninterrupted time (approximately 60 minutes) is needed (Williams, 2011). These requirements may deter clients from using this alternative method of regaining bowel control.

Evaluating

The goals established during the planning phase are evaluated according to specific desired outcomes, also established in that phase. If outcomes are not achieved, the nurse should explore the reasons. The nurse might consider some or all of the following questions:

- Were the client's fluid intake and diet appropriate?
- Was the client's activity level appropriate?
- Are prescribed medications or other factors affecting the gastrointestinal function?
- Do the client and family understand the provided instructions well enough to comply with the required therapy?
- Were sufficient physical and emotional support provided?

NURSING CARE PLAN Altered Bowel Elimination

Assessment Data	Nursing Diagnosis	Desired Outcomes
NURSING ASSESSMENT Mrs. Emma Brown is a 78-year-old widow of 9 months. She lives alone in a low-income housing complex for older adults. Her two children live with their families in a city approximately 150 miles away. She has always enjoyed cooking for her family; however, now that she is alone, she does not cook for herself. As a result, she has developed irregular eating patterns and tends to prepare soup-and-toast meals. She gets little exercise and has had bouts of insomnia since her husband's death. For the past month, Mrs. Brown has been having a problem with constipation. She states she has a bowel movement about every 3 to 4 days and her stools are hard and painful to excrete. Mrs. Brown decides to attend the health fair sponsored by the housing complex and seeks assistance from the county public health nurse.	*Constipation* related to low-fiber diet and inactivity (as evidenced by infrequent, hard stools; painful defecation; abdominal distention)	**Bowel Elimination [0501]**, not compromised as evidenced by: • Ease of stool passage • Stool soft and formed • Passage of stool without aids

Physical Examination

Height: 162 cm (5′4″)
Weight: 65 kg (143 lb)
Temperature: 36.2°C (97.2°F)
Pulse: 82 beats/min
Respirations: 20/min
Blood pressure: 128/74 mmHg
Active bowel sounds, abdomen slightly distended

Diagnostic Data

CBC: Hgb 10.8
Urinalysis negative

NURSING CARE PLAN Altered Bowel Elimination—*continued*

Nursing Interventions*/Selected Activities	Rationale
CONSTIPATION/IMPACTION MANAGEMENT [0450]	
Identify factors (e.g., medications, bed rest, diet) that may cause or contribute to constipation.	*Assessing causative factors is an essential first step in teaching and planning for improved bowel elimination.*
Encourage increased fluid intake, unless contraindicated.	*Sufficient fluid intake is necessary for the bowel to absorb sufficient amounts of liquid to promote proper stool consistency.*
Evaluate medication profile for gastrointestinal side effects.	*Constipation is a common side effect of many drugs including narcotics and antacids.*
Teach Mrs. Brown how to keep a food diary.	*An appraisal of food intake will help identify if Mrs. Brown is eating a well-balanced diet and consuming adequate amounts of fluid and fiber. Excessive meat or refined food intake will produce small, hard stools.*
Instruct Mrs. Brown on a high-fiber diet, as appropriate.	*Fiber absorbs water, which adds bulk and softness to the stool and speeds up passage through the intestines.*
Instruct her on the relationship of diet, exercise, and fluid intake to constipation and impaction.	*Fiber without adequate fluid can aggravate, not facilitate, bowel function.*
Exercise Promotion [0200]	
Encourage verbalization of feelings about exercise or need for exercise.	*Perceptions of the need f*or exercise may be influenced by misconceptions, cultural and social *beliefs, fears, or age.*
Determine Mrs. Brown's motivation to begin/continue an exercise program.	*Individuals who have been successful in an exercise program can assist Mrs. Brown by providing* incentive and enhancing motivation. For example, a walking partner may be *beneficial.*
Inform Mrs. Brown about the health benefits and physiological effects of exercise.	*Activity influences bowel elimination by improving muscle tone and stimulating peristalsis.*
Instruct her about appropriate types of exercise for her level of health, in collaboration with a primary care provider.	*Any individual beginning an exercise program should consult a primary care provider primarily for a cardiac evaluation. Mrs. Brown's age and lack of activity should be considered in planning the level of activity.*
Assist Mrs. Brown to set short-term and long-term goals for the exercise program.	*Realistic goal setting* provides *direction and motivation.*

Evaluation

Outcome not met. Mrs. Brown has kept a food diary and is able to identify the need for more fluid and fiber, but has not consistently included fiber in her diet. She has started a walking program with a neighbor but is only able to walk for 10 minutes at a time twice a week. She states her last bowel movement was 3 days ago.

*The NOC # for desired outcomes and the NIC # for nursing interventions are listed in brackets following the appropriate outcome or intervention. Outcomes, interventions, and activities selected are only a sample of those suggested by NOC and NIC and should be further individualized for each client.

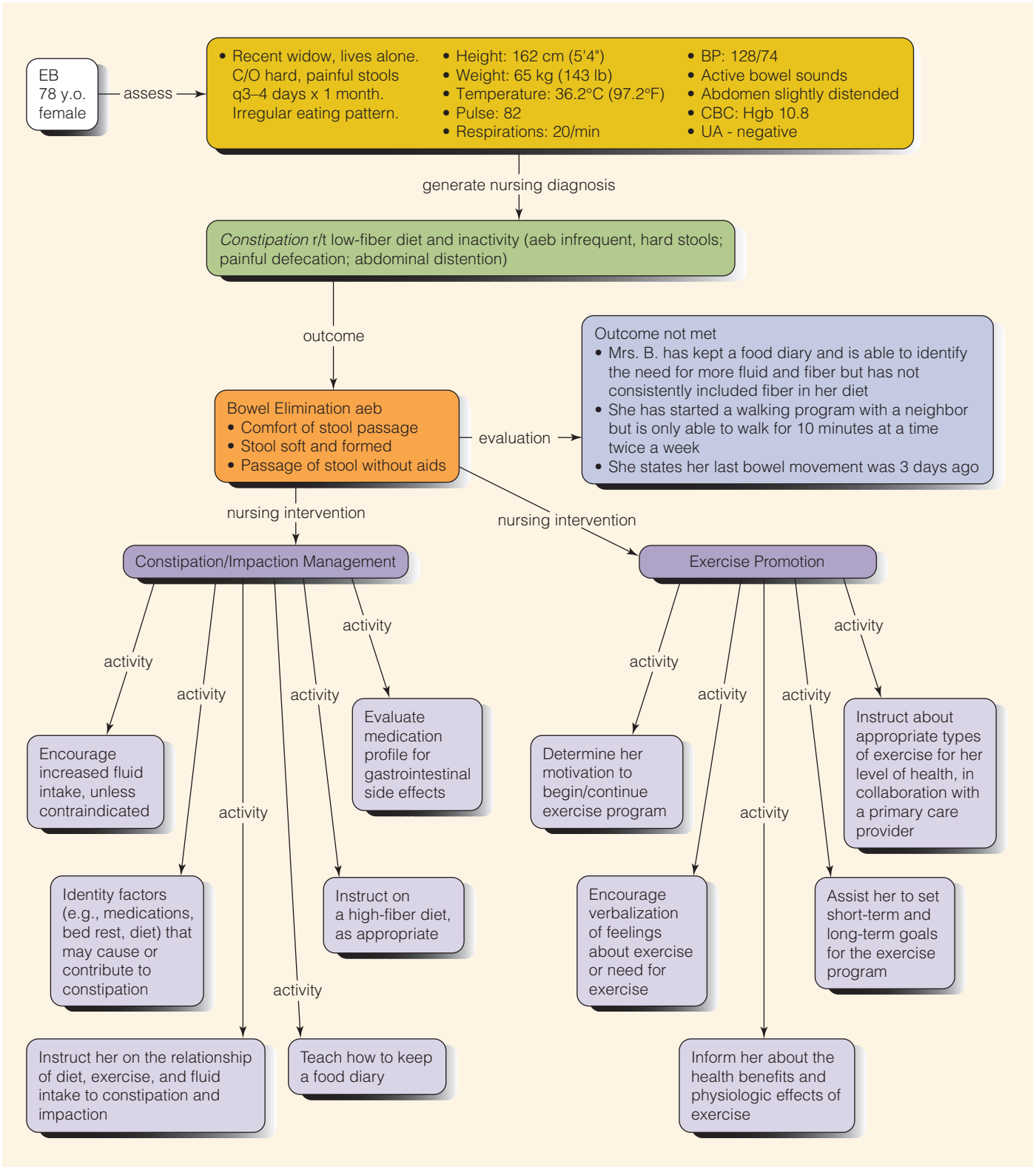
APPLYING CRITICAL THINKING

1. You learn that Mrs. Brown's stools have been liquid, in very small amounts, and at infrequent intervals, generally occurring when she feels the urge to defecate. What additional data are important to obtain from her?
2. What nursing intervention is most appropriate before making suggestions to correct or prevent the problem she is experiencing?
3. What suggestions can you give her about maintaining a regular bowel pattern?
4. Explain why cathartics and laxatives are generally contraindicated for people in Mrs. Brown's situation.

See Critical Thinking Possibilities on student resource website.

CONCEPT MAP

Altered Bowel Elimination



Chapter 49 Review

CHAPTER HIGHLIGHTS

- Primary functions of the large intestine are the absorption of water and nutrients, the mucoid protection of the intestinal wall, and fecal elimination.
- Patterns of fecal elimination vary greatly among people, but a regular pattern of fecal elimination with formed, soft stools is essential to health and a sense of well-being.
- Various factors affect defecation: developmental level, diet, fluid intake, activity and exercise, psychological factors, defecation habits, medications, diagnostic and medical procedures, pathologic conditions, and pain.
- Common fecal elimination problems include constipation, diarrhea, bowel incontinence, and flatulence. Each has specific defining characteristics and contributing causes that often relate to or are identical to the factors that affect defecation.
- Lack of exercise, irregular defecation habits, and overuse of laxatives are all thought to contribute to constipation. Sufficient fluid and fiber intake are required to keep feces soft.
- An adverse effect of constipation is straining during defecation, during which the Valsalva maneuver may be used. Cardiac problems may ensue.
- An adverse effect of prolonged diarrhea is fluid and electrolyte imbalance.
- Assessment relative to fecal elimination includes a nursing history; physical examination of the abdomen, rectum, and anus; and in some situations, visualization studies and inspection and analysis of stool for abnormal constituents such as blood.
- A nursing history includes data about the client's defecating pattern, description of feces and any changes, problems associated with elimination, and data about possible factors altering bowel elimination.
- When inspecting the client's stool, the nurse must observe its color, consistency, shape, amount, odor, and the presence of abnormal constituents.
- A function of the nurse is to assist clients with diet and bowel preparation before endoscopic and radiographic studies of the large intestine.
- NANDA-approved nursing diagnoses that relate specifically to altered bowel elimination include *Bowel Incontinence, Risk for Constipation, Constipation, Perceived Constipation, Diarrhea,* and *Dysfunctional Gastrointestinal Motility.* However, because altered elimination patterns affect several areas of human functioning, diagnoses such as *Risk for Deficient Fluid Volume, Risk for Electrolyte Imbalance, Risk for Impaired Skin Integrity, Situational Low Self-Esteem, Disturbed Body Image, Deficient Knowledge*, and *Anxiety* may also apply.
- Normal defecation is often facilitated in both well and ill clients by providing privacy, teaching clients to attend to defecation urges promptly, assisting clients to normal sitting positions whenever possible, encouraging appropriate food and fluid intake, and scheduling regular exercise.
- Nursing strategies include administering cathartics and antidiarrheals; administering cleansing, carminative, retention, or return-flow enemas; applying protective skin agents; monitoring fluid and electrolyte balance; and instructing clients in ways to promote normal defecation.
- The purpose of an enema is to increase peristalsis and the excretion of feces and flatus. Enemas are classified into four groups: cleansing, carminative, retention, and return-flow enemas.
- Digital removal of an impaction should be carried out gently because of vagal nerve stimulation and subsequent depressed cardiac rate. A primary care provider's order is often necessary.
- Clients who have bowel diversion ostomies require special care, with attention to psychological adjustment, diet, and stoma and skin care. A variety of stoma management methods is available to these clients, depending on the type and position of the ostomy.

TEST YOUR KNOWLEDGE

1. Clients should be taught that repeatedly ignoring the sensation of needing to defecate could result in which of the following?
   1. Constipation
   2. Diarrhea
   3. Incontinence
   4. Hemorrhoids

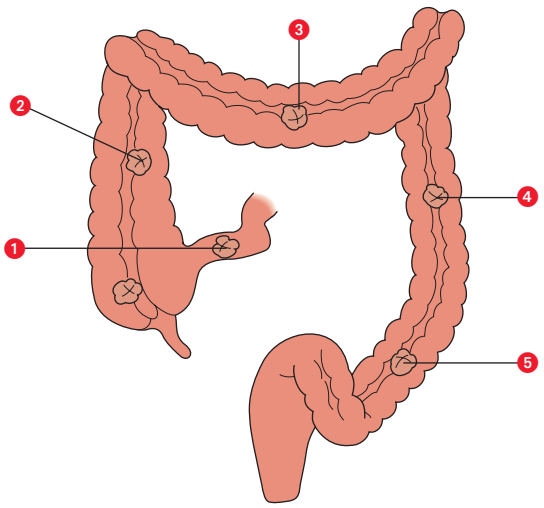
2. Which statement provides evidence that an older adult who is prone to constipation is in need of further teaching?
   1. "I need to drink one and a half to two quarts of liquid each day."
   2. "I need to take a laxative such as Milk of Magnesia if I don't have a BM every day."
   3. "If my bowel pattern changes on its own, I should call you."
   4. "Eating my meals at regular times is likely to result in regular bowel movements."

3. A client is scheduled for a colonoscopy. The nurse will provide information to the client about which type of enema?
   1. Oil retention
   2. Return flow
   3. High, large volume
   4. Low, small volume

4. The nurse is most likely to report which finding to the primary care provider for a client who has an established colostomy?
   1. The stoma extends 1/2 in. above the abdomen.
   2. The skin under the appliance looks red briefly after removing the appliance.
   3. The stoma color is a deep red-purple.
   4. The ascending colostomy delivers liquid feces.

5. Which goal is the most appropriate for clients with diarrhea related to ingestion of an antibiotic for an upper respiratory infection?
   1. The client will wear a medical alert bracelet for antibiotic allergy.
   2. The client will return to his or her previous fecal elimination pattern.
   3. The client will verbalize the need to take an antidiarrheal medication prn.
   4. The client will increase intake of insoluble fiber such as grains, rice, and cereals.

6. A client with a new stoma who has not had a bowel movement since surgery last week reports feeling nauseous. What is the appropriate nursing action?
   1. Prepare to irrigate the colostomy.
   2. After assessing the stoma and surrounding skin, notify the surgeon.
   3. Assess bowel sounds and administer antiemetic.
   4. Administer a bulk-forming laxative, and encourage increased fluids and exercise.
7. The nurse assesses a client's abdomen several days after abdominal surgery. It is firm, distended, and painful to palpate. The client reports feeling "bloated." The nurse consults with the surgeon, who orders an enema. The nurse prepares to give what kind of enema?
   1. Soapsuds
   2. Retention
   3. Return flow
   4. Oil retention
8. Which of the following is most likely to validate that a client is experiencing intestinal bleeding?
   1. Large quantities of fat mixed with pale yellow liquid stool
   2. Brown, formed stools
   3. Semisoft black-colored stools
   4. Narrow, pencil-shaped stool
9. Which nursing diagnoses is/are most applicable to a client with fecal incontinence? Select all that apply.
   1. *Bowel Incontinence*
   2. *Risk for Deficient Fluid Volume*
   3. *Disturbed Body Image*
   4. *Social Isolation*
   5. *Risk for Impaired Skin Integrity*
10. A student nurse is assigned to care for a client with a sigmoidostomy. The student will assess which ostomy site?



See Answers to Test Your Knowledge in Appendix A.

READINGS AND REFERENCES

Suggested Readings

Daniels, G., & Schmelzer, M. (2013). Giving laxatives safely and effectively. *MEDSURG Nursing*, *22*(5), 290–302.
This article provides information about the modes of action of various laxatives and strategies to help medical–surgical nurses increase medication effectiveness and prevent adverse effects.

Toner, F., & Claros, E. (2012). Preventing, assessing, and managing constipation in older adults. *Nursing*, *42*(12), 32–39. doi:10.1097/01.NURSE.0000422642.83383.17
The authors point out that half of all older adults suffer from constipation. They provide comprehensive information on understanding the pathophysiology, the classifications of constipation, the Rome II diagnostic criteria, treating constipation, possible complications, and nursing considerations.

Related Research

Croswell, E., Bliss, D. Z., & Savik, K. (2010). Diet and eating pattern modifications used by community-living adults to manage their fecal incontinence. *Journal of Wound Ostomy Continence Nursing*, 37, 677–682. doi:10.1097/WON.0b013e3181feb017

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