Preventing, assessing, and managing constipation in older adults

By Francis Toner, BSN, RN, and Edith Claros, PhD, MSN, RN

UP TO HALF OF ALL older adults (24% to 50%) suffer from constipation. From 10% to 18% of older adults who live in the community and 74% of residents in long-term care use laxatives every day.1

Constipation, one of the five most commonly diagnosed conditions in outpatient visits, is a significant and potentially costly problem because of the expense of over-the-counter medications, healthcare provider office visits, ED and related hospital admissions, specialty referrals, and associated surgical procedures.1,2

Age-related changes affecting the gastrointestinal (GI) system, including decreased peristalsis and altered acid secretion, are often overlooked.3 Constipation reduces patients’ quality of life. Depression, anxiety, decreased social activities, and pain can significantly undermine their physical and mental well-being.2,4

This article describes how nurses can prevent, assess, and manage constipation to promote the highest level of health and functionality for their patients.

Distressing problem
Constipation is commonly described as infrequent bowel movements, straining for a movement, a decrease in volume or weight of stool, a sense of incomplete evacuation, or dependence on laxatives, enemas, or suppositories to maintain regular bowel movements.5 Regularity of normal bowel movements varies from person to person, from three times daily to three times weekly.6 Patients who meet Rome III diagnostic criteria guidelines may be diagnosed with functional constipation, a classified GI disorder. (More on these guidelines later.) Some patients who don’t have a bowel movement for several days don’t experience any discomfort or harmful effects.

The population of those 65 and older is expected to increase to 88.5 million by 2050; those 85 and older will double to 9.6 million during the same period.7 Nurses will care for a higher percentage of older adults with chronic conditions such as constipation. Potential health-related consequences of constipation, such as impaired quality of life, fecal impaction, and incontinence, make it a significant public health issue for older adults.6,8

Understanding the pathophysiology
Stool volume and consistency are determined by fluid content; normally, water volume accounts for 70% to 85% of total stool weight. Stool fluid volume reflects a balance between luminal input by ingestion and absorption along the GI tract.9,10

(See Focusing on the GI system.)
For an adult, normal fluid intake varies depending on the amount of calories spent for energy. For example, someone consuming 1,800 calories will need 1,800 mL of water intake to meet metabolic demands. During a 24-hour period, the amount of fluid intake in a normal adult averages 2,600 mL. The main function of the small intestine is water absorption; it lets only about 1 to 1.5 L pass through the ileocecal valve to the colon. The colon absorbs most of the remaining fluid, leaving about 100 mL of fecal fluid daily to be added to the total daily stool output, which is about 200 mL. Fluid absorption by the intestinal epithelium is directly influenced by transit time, or colonic motility.

Colonic motility mixes luminal contents to promote water absorption and moves luminal contents along the GI tract. Mixing in the colon is accomplished by short- or long-duration stationary contractions or nonpropulsive contractions. Fecal movement in the colon is accomplished by propulsive contractions known as high-amplitude propagating contractions. These strong colonic pressure waves, which originate from variable sections of the colon and travel toward the rectum, are the main mechanism for transferring feces from the right to left colon once or twice daily.

Decreased motility of propulsive contractions causes the feces to remain stationary and can lead to constipation. Increased motility of nonpropulsive contractions increases fecal mixing and fluid absorption, also causing constipation. Decreased motility and excess fluid removal can lead to feces becoming innsipated and impacted, causing constipation.

Classifying constipation
Constipation is classified into three basic pathophysiological categories: normal transit, slow transit, and disorders of defecation.

- **Normal-transit constipation (or functional constipation)** is defined as perceived difficulty in defecation. It usually responds positively to noninvasive treatments, such as increasing fluid and fiber intake, engaging in moderate exercise, and setting regular bowel patterns, usually after a meal when colon activity is at a peak. Patients experience this type of constipation due to an inability to evacuate stool from the rectum, even though stool traverses at a normal rate and frequency may remain normal. Common causes for functional constipation include inadequate fluid and fiber intake, inactivity and bed rest, abdominal muscle weakness, failure to respond...
to defecation urges, a change in bowel patterns, hemorrhoids, and pregnancy.

- **Slow-transit constipation (STC)** is defined as infrequent bowel movements caused by an alteration in intestinal innervation. Also known as colonic inertia, STC results in slowed intestinal transit and impaired colonic contractions due to dysfunctional colonic intrinsic reflex mechanisms. The causes of STC aren’t well understood. However, Hirschsprung disease is an extreme form of STC characterized by narrowing of the bowel due to a lack of ganglion cells in the distal bowel caused by a defect during embryonic development.

- **Defecation disorders** are characterized by a dysfunction of the anal sphincter or pelvic floor hypertonicity, known as dyssynergia. Though less common, structural abnormalities such as rectal prolapse, intussusception, rectocele, and perineal descent can lead to defecation disorder.

Constipation can be caused by a primary disorder of intestinal motility or by a secondary cause, such as an adverse reaction to a prescribed medication. In addition, it may appear as a direct symptom of obstructing lesions of the GI tract or as a complication of a disease such as hypothyroidism. Chronic constipation is associated with neurologic, endocrine, systemic, and metabolic disorders. (For more details, see What factors contribute to constipation?)[2,6,28]

### What factors contribute to constipation?[^2][^6][^28]

This is not an all-inclusive list.

<table>
<thead>
<tr>
<th>Medications</th>
<th>Diseases</th>
<th>Foods</th>
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</thead>
<tbody>
<tr>
<td>Aluminum antacids</td>
<td>Amyloidosis</td>
<td>Caffeine</td>
</tr>
<tr>
<td>Anticholinergics</td>
<td>Chronic idiopathic intestinal pseudoobstruction</td>
<td>Dairy products</td>
</tr>
<tr>
<td>Antidepressants</td>
<td>Dementia</td>
<td>Fast foods</td>
</tr>
<tr>
<td>Antihistamines</td>
<td>Depression</td>
<td>Fatty meats</td>
</tr>
<tr>
<td>Barium</td>
<td>Diabetes or poor glycemic control</td>
<td>Packaged foods</td>
</tr>
<tr>
<td>Calcium antacids</td>
<td>Diverticulosis</td>
<td>Processed foods</td>
</tr>
<tr>
<td>Calcium blockers</td>
<td>Hirschsprung disease</td>
<td>Refined white flour and rice</td>
</tr>
<tr>
<td>Calcium supplements</td>
<td>Hypercalcemia</td>
<td>Sucrose</td>
</tr>
<tr>
<td>Diuretics</td>
<td>Hypothyroidism</td>
<td>Wheat and white bread</td>
</tr>
<tr>
<td>Iron supplements</td>
<td>Lupus</td>
<td></td>
</tr>
<tr>
<td>Levodopa</td>
<td>Multiple sclerosis</td>
<td></td>
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<tr>
<td>Opioids</td>
<td>Parkinson disease</td>
<td></td>
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<tr>
<td>Psychotropics</td>
<td>Scleroderma</td>
<td></td>
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<tr>
<td></td>
<td>Spinal cord injury</td>
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Arriving at a diagnosis

The Rome III diagnostic criteria are effective in determining functional constipation in a patient experiencing associated constipation symptoms that persist for at least 3 months with symptom onset at least 6 months before diagnosis. To meet diagnostic criteria for functional constipation, the patient can’t meet the criteria for irritable bowel syndrome and rarely has loose stools without using laxatives. Additionally, two or more of the following symptoms must be present during at least 25% of defecations:

- straining
- lumpy or hard stools
- sensation of incomplete evacuation
- sensation of anorectal obstruction/blockage
- manual maneuvers to facilitate defecation
- fewer than three defecations per week. [^16]

Diagnosis is based on the patient’s history, physical manifestations, and test results. The history should include the patient’s defecation pattern, including time of day, frequency, amount and consistency of stool, and present and past bowel regimens. Also assess for diet and fluid intake, patient mobility, obstetric/gynecologic history, surgical history, medication history, associated diseases that may affect bowel motility, and alterations in perianal sensation. Determine any patient misconceptions regarding bowel habits.

Encourage the patient to keep a 7- to 14-day diary of bowel habits, noting time of day, frequency, stimuli causing defecation, stool characteristics, and any aids and/or maneuvers needed during defecation. For new-onset constipation, determine if the patient has recently stopped smoking. Smoking cessation causes constipation in one in six people and can sometimes be very severe.[^17][^18]

When performing medication reconciliation, assess the relationship...
between the start of a medication and the onset of constipation symptoms. Pay careful attention to medications that are known to cause constipation as an adverse reaction, such as opioids. For patients receiving temporary opioids, request stool softeners and/or laxatives if constipation develops. For patients receiving round-the-clock opioids for palliative care, speak with the provider about the possibility of adding methylnaltrexone or alvimopan. These drugs block opioid effects on the GI tract without interfering with analgesia.

After documenting the patient’s history, perform a physical assessment. First inspect the abdomen, then auscultate for bowel sounds, percuss for dullness, and palpate for masses. Constipation often causes the abdomen to become distended and tender, and stool in the colon causes a dull percussion note.

If a digital rectal exam is indicated, try to identify any fissures or hemorrhoids, which can be caused by constipation or which can cause secondary constipation due to stool retention from the pain. Check for a gaping or asymmetric anal opening, characteristics of a neurologic disorder impairing the anal sphincter.

Try to evaluate the puborectalis and external anal sphincter muscles’ function by asking the patient to strain during the exam. This may help identify a patient with possible dyssynergic defecation. Assess for impaction, especially in patients with spinal cord compression and advanced multiple sclerosis.

Tell patients to consult a healthcare provider if signs and symptoms of constipation persist for 3 weeks or more and to consult one immediately if they see blood in the stool. Emergency signs and symptoms include hematochezia, sudden or unexplained weight loss up to or exceeding 10 lb (4.5 kg), anemia, positive fecal occult blood tests, family history of colon cancer or inflammatory bowel disease, and an acute onset of constipation in older adults. It may require invasive testing at the discretion of the healthcare provider.

Pertinent lab test results should be made available to the healthcare provider, especially for patients who have emergent signs or symptoms. Lab data should include a complete blood cell count and serum glucose, calcium, creatinine, and thyroid-stimulating hormone levels.

Diagnostic studies for constipation may be indicated and can include anorectal function tests, colorectal transit studies, and defecography (evacuation proctography). Studies to rule out colorectal cancer may include a barium enema X-ray, sigmoidoscopy, and colonoscopy.

Anorectal function studies, which include anorectal manometry and balloon expulsion tests, help clinicians diagnose constipation caused by abnormal anal or rectal function.

During anorectal manometry, an air-filled balloon, also known as a radial catheter, is inserted into the anus 6 to 8 cm (2.4 to 3.1 in.) above the anal verge (the distal end of the anal canal, forming the transitional zone between the skin of the anal canal and the perianal skin), then slowly pulled back to evaluate anal sphincter function. The test measures muscle tone, luminal pressure, and contractions.

The balloon expulsion test is conducted by inserting a balloon catheter into the rectum and filling the balloon with varying amounts of water. The patient is then asked to expel the water-filled balloon; inability to expel a balloon of less than 150 mL of water indicates a decrease in bowel function. Another approach to assess defecation dysfunction involves a 50-mL water-filled balloon. If the patient can expel the balloon in less than 1 minute, a dysfunction is unlikely.

The colorectal transit study measures how long it takes food to travel through the colon. During the study, the patient eats a high-fiber diet after swallowing radiopaque markers. Movement of the markers is recorded by abdominal X-rays taken several times daily for 3 to 7 days.

Defecography evaluates rectal muscle contractions and relaxation and completeness of stool elimination, and identifies anorectal abnormalities. Defecography is performed by placing 150 mL of barium into the patient’s rectum and monitoring the route of evacuation by fluoroscopy while the patient sits on a specially constructed commode. The patient is asked to squeeze, cough, and bear down so the anorectal structures can be visually assessed.
Diagnostic study results help determine the most effective course of treatment.

**Treating the problem**

Bowel regularity is affected by diet, medication use, disease, and habit. Depending on the cause, treatment for constipation may include nonpharmacologic and pharmacologic measures. Standard treatments include increasing fiber and fluid intake, exercising, avoiding constipation-causing drugs, and instituting appropriate bowel training and biofeedback.

Treatment should begin with the least invasive options, such as diet and lifestyle modifications. These are appropriate for both acute and chronic constipation.

Diet recommendations include consuming 60 to 80 oz (1.8 to 2.4 L) of fluid and 25 to 30 g of fiber daily unless contraindicated to promote healthy bowel movements. Reaching the daily recommended fiber intake can be achieved by adding foods such as bran, shredded wheat, whole-grain breads, and certain fruits and vegetables.

Adding the “colon cocktail” to a patient’s diet can maintain stool consistency. This usually consists of equal portions of prune juice, applesauce, and psyllium, a common form of bran. The cocktail is refrigerated, and the patient takes 1 to 2 tablespoons (15 to 30 mL) daily. Promoting proper bowel function helps prevent constipation by regulating proper formation and frequency of stool.

If nonpharmacologic treatments are inadequate, laxatives may be added to the treatment regimen. Laxatives are classified into one of five primary groups.

- Bulk-forming laxatives, such as psyllium seed and methylcellulose, absorb water, adding to the size of the fecal mass.
- Osmotic laxatives, such as low-dose polyethylene glycol and saline laxatives, aren’t absorbed in the intestine; instead, they pull water into the fecal mass to create more watery stool.
- Stimulant laxatives, such as senna and bisacodyl, irritate the bowel to increase peristalsis.
- Stool softeners or surfactants, such as docusate, cause more water and fat to be absorbed into the stool.
- Miscellaneous agents include mineral oil, which acts by lubricating the stool and colon mucosa.

For patients with opioid-induced constipation (OIC) or dysfunction, prevention strategies alone won’t be sufficient. These patients require a bowel regimen that combines a stool softener and stimulant medications, such as docusate and senna, accompanying the opioid prescription. Bulk laxatives aren’t recommended in patients with OIC due to impaired peristalsis. OIC can also be managed by using peripherally acting mu-opioid receptor antagonists such as methylnaltrexone and alvimopan. These types of medications provide pain relief while minimizing the effects of opioids on GI motility.

A bowel regimen may consist of a step-level approach in which medication combinations are prescribed based on the patient’s response to treatment.

**Close-up on methylnaltrexone**

A relatively new drug, methylnaltrexone is used for the treatment of OIC. It has its own classification, which means that it’s not a laxative. The drug was developed to target the primary cause of OIC in adults with advanced illness who are being treated with opioids for chronic pain.

Methylnaltrexone works by displacing the opioid from the peripheral mu receptors that affect GI tract motility. This reverses constipation at its source without disrupting the opioid’s analgesic effect. The drug doesn’t cross the blood-brain barrier. Methylnaltrexone is administered subcutaneously based on body weight, once every other day as needed. Because it provides predictable, quick results, patients using this drug don’t need further bowel interventions.

Glycerin suppositories, which can increase water retention and stimulate peristalsis, usually produce a bowel movement in less than an hour. Enemas, an invasive treatment, cause the distal colon or rectum to empty any retained solid material through bowel distention, producing an evacuation reflex in most people.

Long-term or chronic use of enemas and/or laxatives can interfere with the defecation reflex and may damage the rectal mucosa, leading to diarrhea and fecal incontinence. This can cause such adverse reactions as electrolyte abnormalities, bloating, flatulence, and cramming. (See “Fleet enemas: Don’t underestimate the risk” on page 12.) Because laxatives are linked to weight loss and malnutrition, increasing dietary intake of oat and fiber is a better approach. Fiber intake should be increased gradually because a rapid increase may cause excessive gas production and bloating.

**On alert for complications**

Complications of constipation include hemorrhoids, anal fissures, rectal prolapse, intestinal obstruction, and fecal impaction.

Fecal impaction occurs when hard stool packs the intestine or rectum so tightly that stool can’t be expelled. It’s more prevalent in women and older adults. After ruling out bowel perforation or bleeding, treatment...
begins by softening the stool with mineral oil or an enema, placing the patient in Sims’ position, then inserting one or two lubricated gloved fingers into the anus and breaking up the feces. In older adults, severe fecal impaction can lead to intestinal obstruction, a medical emergency.26 Because fecal impaction can manifest as delirium in older patients, be sure to assess a patient with a change in mental status for this problem and to identify and prevent any potential causes of constipation, including a review of medications that can aggravate the condition. In inpatient settings, provide access to and assistance with toileting regularly to prevent constipation and to maintain a bowel regimen.

**Nursing considerations**

Nurses are in an ideal position to identify patients at risk for constipation and to assess for signs and symptoms. Obtain the patient’s health history, noting risk factors such as inadequate fluid intake, decreased mobility, and comorbid conditions. Assess the patient’s diet, including fiber intake. Perform medication reconciliation, including the use of over-the-counter medications and herbal supplements. Look for anything that may contribute to constipation or be used for self-treatment, such as laxatives.27

Ask about the patient’s oral health; changes in appetite; patterns of bowel movements; consistency, color, and size of the stool; seepage of stool; degree of straining during bowel movements, ignoring the urge to defecate; and nausea, vomiting, or other GI complaints.3

Ask about the patient’s living conditions—for example, whether the patient lives alone or with family or friends—and the patient’s ability for self-care, including toileting, bathing, and dressing. Also assess the patient for eating or swallowing difficulties that may contribute to weight loss, changes in skin integrity (such as hemorrhoids, anal fissures, and skin ulcerations), and risk of falls in patients who use laxatives.3

Educate patients about decreasing their use of laxatives to prevent adverse reactions associated with chronic laxative use. Encourage patients to make lifestyle modifications that help improve GI functioning, such as increasing physical activity. Encourage patients to follow a bowel training regimen promoting defecation in the morning, particularly about 90 minutes after meals or during the gastrocolic reflex (the reflex stimulating peristalsis after a meal).28

Promote nonpharmacologic measures, including increasing fiber and water intake, as tolerated. Adding fiber products such as oat bran to the diet can decrease patients’ dependence on laxatives while helping them maintain a healthy body weight.25,29 Educate them about foods that are high in fiber. (See Selecting high-fiber foods.)

Consuming fiber improves bowel function and regularity, increases bowel movement frequency, improves stool consistency, and reduces painful straining. The use of fiber has been shown to reduce the costs of treatment.14,23,26

As the patient’s primary advocate, nurses have the responsibility to protect and foster the patient’s well-being. By reducing laxative use, nurses also help reduce the risk of adverse reactions. Nurses are in an ideal position to inform patients that dietary and lifestyle modification can be a simple and cost-effective intervention. ■

**REFERENCES**


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The authors and planners have disclosed that they have no financial relationships related to this article.

DOI:10.1097/01.NURSE.0000422642.85383.17

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December | Nursing2012 | 39

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