Constipation is a common symptom causing visits to the emergency department (ED) and rarely requires extensive ED evaluation or hospital admission. Associated signs and symptoms determine the optimal ED approach to evaluation and management. Although the majority of these patients will have chronic functional constipation, identifying which patients have serious underlying pathology is of greatest concern for the emergency physician (EP).

EPIDEMIOLOGY
Constipation is common at all ages, with the reported prevalence ranging from 2% to 27%, depending on the definition used. Prevalence is higher in women than in men (approximately 2:1), perhaps related to an increased prevalence of pelvic floor dyssynergia in women. Prevalence is higher in the elderly: in those older than 84 years, self-reported rates are 25.7% in men and 34.1% in women, and up to 74% of elderly nursing home residents are taking laxatives daily. The condition is much less common in populations with non-Western diets containing more bulk. Although many people do not seek medical attention for their constipation, this condition is estimated to result in almost $7 billion in medical costs in the United States each year.

PATHOPHYSIOLOGY
Constipation is often multifactorial, with disordered movement of stool through the colon and anorectum. Oral intake, hydration, and general mobility affect colonic function. Numerous anatomic and structural entities, gastrointestinal (GI) disorders, medications, and systemic disorders may secondarily lead to constipation (Boxes 37.1 to 37.4) by altering intraluminal contents, fluid balance, intestinal contractions, or neuromuscular coordination. However, the majority of patients have primary chronic functional constipation that falls into one or more of three categories. Many actually have normal intestinal transit time; their constipation is perceptual and related to habits. Others have slow transit times because of overall colonic slowing (pancolonic inertia) or sigmoid spasm (left colonic hypermotility with uncoordinated segmental contractions and poor propulsion). An important but under-recognized group has pelvic floor dyssynergy (obstructive defecation), an acquired behavioral condition that begins with chronically ignoring the urge to defecate. Disordered defecatory function of the pelvic floor muscles and sphincters eventually produces difficulty expelling stool, even if soft. Hormonal contributions are unclear, but constipation is common in pregnancy and before menstruation. Contrary to past thinking, chronic laxative abuse does not cause chronic constipation. High rates in the elderly are not due to aging itself but to concomitant conditions or medications.

PRESENTING SIGNS AND SYMPTOMS
To the physician, the term constipation usually means a reduced frequency of bowel movements (less than three per week in Western culture) or difficult passage of hard stool (or both). To the patient, constipation may mean frequency reduced to less than daily, decreased volume per defecation, passage of hard stool, difficulty passing stool, straining, a feeling of incomplete evacuation, abdominal pain, rectal pain,
inability to defecate when desired or without a laxative, abdominal distention or bloating, or any combination thereof. An individual’s perception of what is “normal” is also highly variable and often deeply ingrained, with many convinced that less than one stool per day is a serious problem.

A formal consensus definition is therefore used by gastroenterologists, and the label of chronic functional constipation requires two or more of the following occurring for at least 3 months of the past year: straining for at least 25% of defecations, lumpy or hard stools in 25% or more of defecations, sensation of incomplete evacuation in 25% or more of defecations, sensation of anorectal obstruction or blockage in 25% or more of defecations, manual maneuvers to facilitate passage (digital evacuation or support of the pelvic floor) in 25% or more of defecations, or fewer than three defecations per week. A practical pediatric definition is delay or difficulty in defecation present for 2 or more weeks. Abdominal bloating and mild diffuse abdominal discomfort are common with functional constipation. Vomiting, severe pain, fever, and GI bleeding indicate more serious causes. Passage of hard stool may produce rectal bleeding, but the quantity should be small. Straining may cause dizziness, a vagal reaction, or both.

With functional constipation, the findings on physical examination should be normal other than palpation of abundant stool on abdominal or rectal examination (or both) and perhaps mild discomfort on abdominal palpation.

### BOX 37.1 Gastrointestinal Causes of Constipation

- Anal fissure
- Anal stricture
- Anorectal (pelvic) dyssynergy
- Chronic poor toileting habits
- Diverticular disease
- Functional constipation
- Hemorrhoids
- Hernias (incarcerated)
- Inflammatory bowel disease
- Intussusception
- Irritable bowel syndrome
- Obstructing lesion
- Perirectal or perianal abscess
- Rectal pain from any cause
- Rectocele
- Strictures and adhesions
- Tumors and neoplasms
- Volvulus

### BOX 37.2 Systemic Causes of Constipation

#### Central Nervous System and Neurogenic Disorders
- Amyotrophic lateral sclerosis
- Autonomic neuropathies
- Cerebral palsy
- Chagas disease
- Cerebrovascular accident
- Delirium
- Dementia
- Hirschsprung disease
- Intestinal pseudoobstruction
- Multiple sclerosis
- Myotonic dystrophy
- Neurofibromatosis
- Parkinson disease
- Shy-Drager syndrome
- Spinal cord lesions:
  - Cauda equina syndrome
  - Meningomyelocele
  - Spinal cord injury
- Trauma to the nervi erigentes

#### Endocrine and Metabolic Disorders
- Adrenal insufficiency
- Amyloidosis
- Celiac disease
- Cushing syndrome
- Cystic fibrosis
- Diabetes
- Glucagonoma
- Hypercalciemia
- Hyperparathyroidism
- Hypokalemia
- Hypomagnesemia
- Hypophosphatemia
- Hypothyroidism
- Multiple endocrine neoplasia type 2B
- Panhypopituitarism
- Pheochromocytoma
- Porphyria
- Pregnancy
- Uremia

#### Psychiatric Disorders
- Anorexia and bulimia
- Chronic psychoses
- Defecation avoidance
- Depression

#### Lifestyle and Nutritional Problems
- Dehydration from any cause
- Immobility
- Inadequate dietary intake, especially fiber
- Inadequate toileting opportunities

#### Collagen Vascular Disorders
- Dermatomyositis
- Systemic lupus erythematosus
- Systemic sclerosis

#### Other
- Intraabdominal abscess
- Pelvic mass
- Pelvic trauma
**DIFFERENTIAL DIAGNOSIS AND MEDICAL DECISION MAKING**

Constipation is a symptom that may be secondary to a myriad of other causes, but it most often represents chronic functional constipation. Boxes 37.1 to 37.4 list the various causes of secondary constipation—GI and systemic disorders, medications, and additional causes in children.

Evaluation in the ED is focused on distinguishing potentially serious cases that warrant immediate inpatient care via a careful history (what the patient means by the term constipation, bowel history, and potential underlying causes, especially medications) and examination (particularly vital signs, abdominal examination, perirectal inspection, and rectal examination). With chronic symptoms, it is important to ask what precipitated today’s ED visit. New-onset constipation suggests new medications, sudden lifestyle changes, anal sphincter spasm and pain, or more serious conditions, including mass lesions and intestinal obstruction.

Signs of obvious systemic abnormalities, volume depletion, infection, peritonitis, ileus, and obstruction are important to identify early. In patients with functional constipation, abdominal examination should find only mild discomfort at most. Excessive colonic stool can often be palpated. Unlike a solid mass, stool should indent somewhat on palpation. Serial abdominal examinations are invaluable in uncertain cases. Fecal impaction, abnormal sphincter tone, and potential sources of bleeding or rectal pain may be detected on perirectal and rectal examination. Anoscopy (with topical anesthetic applied before the examination) is appropriate in patients with rectal complaints.

Red flags for a more serious acute condition include severe pain, vomiting, fever, GI bleeding, acute onset, persistent tachycardia, hypotension, and peritoneal signs. Elderly patients warrant higher clinical suspicion for worrisome causes, particularly if febrile, and extraabdominal infections may be manifested as general failure to thrive or constipation. In adults older than 50 years, anemia, weight loss, acute change in bowel habits, GI bleeding, and a family history of colon cancer or inflammatory bowel syndrome (IBS) are “alarm” findings of possible underlying malignancy or IBS and warrant early referral for endoscopy or radiographic studies.

In ED patients in whom clinical suspicion for serious pathology is low, appropriate studies are limited to basic chemistry panels (including calcium) and a complete blood count. Suspicion of an obstruction, fecal impaction, ileus, megacolon, or perforation should prompt plain abdominal films (flat and upright); serial plain films may assist in diagnosing early obstruction when the initial evaluation is unclear. Emergency computed tomography (CT) scans are appropriately limited to situations suggesting obstruction, intraabdominal abscess, complicated hernia, or diverticulitis. Early surgical consultation is appropriate for probable obstruction or peritonitis.

**CONSIDERATIONS BY PATIENT AGE**

**Neonates**

Neonates have an increased risk for serious underlying illness or anatomic abnormalities, such as Hirschsprung disease, intestinal pseudoobstruction, imperforate anus, or hypothyroidism.
**Children**
Functional constipation is more common in boys, frequently at the time of toilet training or initial school entrance, when children withhold defecation for psychosocial reasons. A vicious cycle of difficult passage of hard stool leads to more withholding, which causes harder stool and more difficult passage. Fecal soiling (encopresis) is a common result and frequent initial symptom.

**Adolescents**
Constipation is more common in adolescent girls than boys, with the predominant symptom being straining to initiate defecation. Typically, this is a functional problem arising from chronic suppression of the urge to defecate for psychosocial reasons. An underlying eating disorder or surreptitious opiate use should also be considered.10

**Adults**
Usually, adults have a chronic functional cause, including IBS. Extreme functional constipation (two or fewer stools per month) is almost exclusively seen in young women.

**Elderly Institutionalized Patients**
Mental confusion, immobility, poor oral intake, limited toileting opportunities, and medications all contribute to a high prevalence of chronic constipation and high risk for fecal impaction. Impaction is the most common cause of fecal incontinence and may lead to stercoraceous ulceration or perforation of the colon.11

**CONSIDERATIONS BY CAUSE**

**Anatomic and Structural Causes**
Examination may reveal anatomic or muscular anomalies or masses (neoplasm, fecaloma, abscess, hernia, closed or trapped loop of bowel, rectoceles) that may cause blockage. Other structural causes are painful rectal disorders, intussusception, volvulus, and adhesions. Lower spinal cord injury may produce constipation or incontinence (or both); with high cord injuries the colonic reflexes usually remain intact, although digital rectal stimulation is often needed to initiate defecation.

**Medications**
An accurate and complete list of medications (prescription, nonprescription, and alternative) should be established because so many cause or exacerbate constipation. Classic scenarios include elderly patients taking multiple prescription drugs, recreational users of opiates, and patients with acute painful injuries who were prescribed opiates without stool softeners.

**Systemic Illnesses**
A long list of metabolic, endocrine, and neurogenic disorders may secondarily produce constipation. These conditions are usually obvious from the history, physical examination, and basic laboratory studies, so extensive diagnostic searches are rarely appropriate in the ED setting.

**Functional Constipation**
In the vast majority of patients, constipation has an idiopathic functional cause related to psychosocial stressors, unintentionally learned rectal dysfunction, and lifestyle habits such as dietary fiber intake, fluid intake, and toileting. About 25% of patients have a component of pelvic dyssynergy. IBS is a common functional dysmotility disorder characterized by intermittent abdominal pain, distension, and variable diarrhea or constipation with no structural lesions found; concomitant upper GI symptoms and pelvic dyssynergy are common.12,13

Diagnosis is inexact because no specific diagnostic tests are available, but the constipation usually responds to bulk agents. Similarly, the label of chronic functional constipation is a clinical one, but exact diagnosis is not needed in the ED setting.

**TREATMENT**

Intravenous fluid repletion with correction of electrolyte disturbances is the mainstay of initial management in sicker patients. Suspected mechanical obstruction or perforation warrants immediate surgical consultation and admission. Intravenous fluids and analgesics are warranted, whereas laxatives are contraindicated. Patients with nausea or vomiting need antiemetics. Those with obstruction or ileus may benefit from nasogastric suctioning, plus an intravenous gastric acid blocker to prevent metabolic alkalosis. Large bowel obstruction may require early colonoscopy with decompression.

Patients with pseudoobstruction warrant inpatient care unless they are known to have chronic intermittent pseudoobstruction with only a mild exacerbation of their constipation. For acute megacolon from colonic pseudoobstruction, the prokinetic neostigmine is a standard therapy, but this is usually ordered by the gastroenterologist and followed by decompressive colonoscopy.14 Prokinetic agents are contraindicated in patients with obstruction, perforation, or peritonitis.

Fecal impaction may complicate long-standing constipation, particularly in nursing home residents or opiate users. Initial cleansing in milder cases may be done safely with large-volume oral polyethylene glycol (PEG), which is done in many nursing homes. Others usually require initial digital disimpaction, as discussed later, followed by PEG cleansing and then a maintenance plan. ED time constraints may prompt admission to an observation unit for initial cleansing.

For patients with uncomplicated constipation, the starting point in the ED focuses on volume repletion and electrolyte correction as needed, followed by a bowel regimen appropriate for the level of fecal loading, plus any treatment specific to contributing causes. The EP should also consider whether pelvic floor dyssynergy is a probable component that the patient should discuss with a primary care physician. The clinician should keep in mind the problem that bothers the patient the most (infrequency, straining, or hard stool) and that the patient’s expectations often include prescription “cures” and an unrealistic goal of rapidly becoming “normal.” Patient education is vital.

The plan for bowel care includes:

- Initial cleansing (usually laxatives, both oral and rectal)
- Maintenance plan (increase fluid and fiber intake, consideration of laxatives or softeners)
- Behavioral modification (diet, toilet habits, exercise)
- Other interventions tailored to the suspected underlying cause or causes
Most patients are sent home with a management plan and education, but initial cleansing in the ED or observation unit and serial reexamination should be considered if a suspicion remains about a more serious underlying cause or if the patient may not be able to perform the initial steps (or has no reliable caretaker to do so). A myriad of products are available for constipation (Table 37.1). Selection should focus on efficacy, safety, and cost, as well as patient preference.

### See Table 37.1 Therapeutic Agents for Constipation in Adults, online at www.expertconsult.com

If ED cleansing is necessary, time constraints prompt the use of stimulant laxatives per rectum, either suppositories (glycerin or bisacodyl) or enemas (tap water or phosphate). A topical anesthetic gel will decrease defecatory pain. Digital disimpaction may speed the process but is generally reserved as a last resort. Digital stimulation (several gentle rotations of a gloved, well-lubricated finger within the rectum) may loosen up fecal concretions and stimulate spontaneous defecation; this may be repeated after a 10-minute pause. If no response is seen, the lumps will need to be gently broken up and removed by finger. In spinal cord or elderly patients, the pulse and blood pressure should be monitored during disimpaction for changes secondary to vagal stimulation or autonomic dysreflexia.16

Outpatient treatment should start with osmotic laxatives such as PEG to be taken at home or just bulk agents, prune juice, or dried prunes if the constipation is mild. A stimulant laxative (e.g., glycerin suppository) is to be taken if the simpler treatment fails.17 Strong evidence supports the use of PEG, moderate evidence supports lactulose and psyllium, and little evidence exists for or against other agents.18,19 In the elderly, all laxative categories may cause some bloating, flatulence, or abdominal pain.20

**Bulk agents** are the first-line maintenance treatment of functional constipation with a normal or slow transit time. Bulk agents increase fecal water content and stool volume, reduce transit time, and improve stool consistency. Bran fiber (25 g/day) in foods may be adequate and must be accompanied by increased fluid intake. Fiber may cause increased gas (bloating, flatulence), but this is less likely if intake is increased gradually.

The **stool softeners** sodium and calcium docusate decrease surface tension and allow stool to mix with fluids but do not induce defecation. These agents are not good for long-term use because of tachyphylaxis, but they are very useful in the short term while taking constipating medications (e.g., opiates) or for patients who should avoid straining.

**Lubricant agents** penetrate and soften stool. Mineral oil can be given orally or by enema. Because it may be aspirated and cause lipoid pneumonia, it should not be used in patients with esophageal dysmotility, dysphagia, or gastroesophageal reflux.

**Osmotic laxatives** are hyperosmotic agents that generally provide excellent relief of constipation and may be used in small doses for the long term if needed. A large volume of PEG is used for procedural preparation or initial cleansing of large fecal loads, but most cases of constipation respond to one packet (17 g) daily, which may be continued as a maintenance dosage; PEG without electrolytes is more palatable. Lactulose and sorbitol (given orally or as enemas) are nonabsorbable sugars degraded by colonic bacteria to acids that increase stool acidity and osmolarity and thereby lead to accumulation of fluid in the colon to speed defecation. Lactulose is excellent for long-term use in small doses but should be avoided in most diabetics. Corn syrup is used in infants.

**Stimulant laxatives** are the most rapidly acting agents and are taken either orally or per rectum (faster). They are likely to cause some cramping. Saline cathartics exert osmotic effects to increase intraluminal water content. Though relatively nonabsorbable, magnesium preparations should be avoided in patients with renal failure because they may cause hypermagnesemia or fluid retention. Castor oil is hydrolyzed to ricinoleic acid, which stimulates intestinal secretion and motility. Bisacodyl causes fluid accumulation and increased motor activity. Anthraquinones (cascarilla, senna) are converted to active states by intestinal microorganisms and increase fluid and electrolyte accumulation in the distal end of the bowel; melanosis coli may result from long-term use but is benign and reversible. Stimulants are not generally recommended for frequent long-term use.

**General measures** often help:

- Higher intake of fluids (>2 L daily) and fiber
- Greater physical mobility and exercise (brisk daily walk)
- Dedicated and unhurried time for defecation

Dietary fiber sources are primarily bran and grains, but dried fruits, pulp-rich citrus juices, many vegetables, and even popcorn contribute fiber. Retraining bowel habits may help; patients must allow an unhurried time (20 minutes or so) to use the toilet, especially after a meal (breakfast is ideal) to take advantage of the gastrocolic reflex, and they should respond to the urge to defecate. Contributing medications require careful review of their necessity, planned duration of use, and alternatives. For drugs that must be continued, increased fiber and the addition of stool softeners may suffice, with daily PEG or lactulose added if needed. Bulk agents may affect the bioavailability of some drugs. The EP must communicate clearly to the patient that the constipation is a side effect of medications that needs to be discussed with the primary care provider.

Concomitant treatment of underlying causes and contributors is essential. Treatment of painful rectal problems improves overall bowel function. Although they are not generally prescribed in an ED setting, other treatments are available.19 Lubiprostone is a bicyclic fatty acid that activates GI chloride channels to increase intestinal fluid secretion and effectively treats chronic functional constipation.21 Even in the elderly, pelvic floor dyssynergy may respond well to physical therapy, behavioral modification, and biofeedback training.22,23 Surgery may relieve specific defects, such as rectoceles, and is the mainstay for treatment of Hirschsprung disease.9

### FOLLOW-UP CARE AND PATIENT EDUCATION

#### ADMISSION

**Indications for admission** are limited to patients with obstruction, pseudoobstruction, severe electrolyte disturbances, or other serious causes of secondary constipation. An observational stay may be appropriate for those with an inability to
<table>
<thead>
<tr>
<th>MEDICATION</th>
<th>TYPE</th>
<th>ADULT DOSE (ORAL UNLESS NOTED)</th>
<th>PRIMARY SIDE EFFECTS</th>
<th>COST/TYPE/PREGNANCY CATEGORY AND COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyethylene glycol</td>
<td>Osmotic</td>
<td>Maintenance: 17 g in 8 oz fluid/day Initial cleansing: 500 mL bid for 1 day, may repeat</td>
<td>Minimal bloating Diarrhea, volume loss, electrolyte loss</td>
<td>$$/OTC/Preg C* May reduce effect or absorption of some oral drugs</td>
</tr>
<tr>
<td>Lactulose</td>
<td>Osmotic</td>
<td>Maintenance: 15-30 mL 1-2 times/day Cleanse: 20-30 g q2h to effect</td>
<td>Flatulence, cramps, nausea, bloating</td>
<td>$$/Rx/Preg B Colonic fermentation to short-chain fatty acids Caution with diabetes (check glucose) Contains galactose and fructose</td>
</tr>
<tr>
<td>Sorbitol 70%</td>
<td>Osmotic</td>
<td>Maintenance: 15-30 mL/day Cleanse: 30-150 mL Enema: 120 mL of 25-30% solution</td>
<td>Flatulence, bloating</td>
<td>$$/Rx/Preg C Decreases effectiveness of other drugs Caution with severe CHF or renal failure</td>
</tr>
<tr>
<td>Anthraquinones</td>
<td>Stimulant</td>
<td>1-2 tablets/day at bedtime 5 mL or two 150-mg tablets daily</td>
<td>Nausea, cramps, Melanosis coli</td>
<td>$/OTC/Preg B Avoid with CHF Decrease effectiveness of warfarin</td>
</tr>
<tr>
<td>Senna</td>
<td>Stimulant</td>
<td>2-3 5-mg tablets/day Suppository: 10 mg daily</td>
<td>Cramps, nausea Urolithiasis</td>
<td>$/OTC/Preg C Decreases effect of warfarin, antacids</td>
</tr>
<tr>
<td>Bisacodyl</td>
<td>Stimulant</td>
<td>15-30 mL once</td>
<td>Cramps, severe diarrhea</td>
<td>$/OTC/Preg X May precipitate premature labor Avoid with CHF</td>
</tr>
<tr>
<td>Castor oil</td>
<td>Stimulant</td>
<td>Maintenance: 15-45 mL/day Cleanse: 150-300 mL once</td>
<td>Some Mg absorption</td>
<td>$/OTC/Preg B Avoid with renal failure, ostomies Decreases effects of digoxin, tetracyclines, indomethacin</td>
</tr>
<tr>
<td>Magnesium citrate</td>
<td>Saline</td>
<td>Maintenance: 15-30 mL once-twice/day</td>
<td>Some Mg absorption</td>
<td>$/OTC/Preg B Avoid with renal failure, ostomies</td>
</tr>
<tr>
<td>Magnesium hydroxide</td>
<td>Saline</td>
<td>Oral: 10-25 mL with 12 oz Enema: One bottle PR</td>
<td>Hyperphosphatemia with renal failure</td>
<td>$/OTC/Preg B Avoid with renal failure, ostomies</td>
</tr>
<tr>
<td>Sodium phosphate</td>
<td>Saline</td>
<td>15-45 mL every night</td>
<td>Malabsorption of fat-soluble vitamins Lipoid pneumonia Nausea</td>
<td>$/OTC/Preg C Avoid if impaired swallowing</td>
</tr>
<tr>
<td>Mineral oil</td>
<td>Lubricant</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Continued
Table 37.1  Therapeutic Agents for Constipation in Adults—cont’d

<table>
<thead>
<tr>
<th>MEDICATION</th>
<th>TYPE</th>
<th>ADULT DOSE (ORAL UNLESS NOTED)</th>
<th>PRIMARY SIDE EFFECTS</th>
<th>COST/TYPE/PREGNANCY CATEGORY AND COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiber</td>
<td>Bulk agent</td>
<td>Take with liberal fluids 15-60 g/day (can divide) 5-20 g/day</td>
<td>Bloating, flatulence</td>
<td>$/OTC/Preg B (psyllium), Titrate upward gradually May affect bioavailability of some medications if taken within 30-60 min</td>
</tr>
<tr>
<td>Psyllium</td>
<td>Bulk agent</td>
<td>15-60 g/day (can divide) 5-20 g/day</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methylcellulose</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polycarbophil</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Docusates</td>
<td>Stool softener</td>
<td>50-200 mg/day (docusate sodium) 240 mg/day (docusate calcium)</td>
<td>Possible hepatotoxicity</td>
<td>$$/OTC/Preg C Poor efficacy for chronic use</td>
</tr>
<tr>
<td>Lubiprostone</td>
<td>Activates chloride channels</td>
<td>24 mcg bid (8 mcg bid with irritable bowel syndrome)</td>
<td>Nausea</td>
<td>$$$/$Rx/Preg C Avoid in children and those with hepatic or renal failure, history of bowel obstruction</td>
</tr>
<tr>
<td>Glycerine suppository</td>
<td>Stimulant laxative</td>
<td>3 g PR Rectal irritation</td>
<td></td>
<td>$/OTC</td>
</tr>
<tr>
<td>Enemas</td>
<td>Stimulant laxatives</td>
<td>120 mL PR</td>
<td>May affect serum phosphate and calcium, irritant, hyperphosphatemia if retained</td>
<td>$/OTC Avoid with renal failure Avoid with CHF</td>
</tr>
<tr>
<td>Phosphate Tap water Saline</td>
<td></td>
<td>100-200 mL PR 100-200 mL PR</td>
<td>Absorbed if retained Fluid overload</td>
<td></td>
</tr>
</tbody>
</table>

*Relative cost indicated by number of $ ($ to $$). CHF, Congestive heart failure; OTC, over-the-counter; Preg, pregnancy category (as determined by the U.S. Food and Drug Administration); PR, per rectum; Rx, prescription drug.
safely perform initial bowel cleansing at home or those with moderate clinical suspicion of another underlying cause (e.g., those with persistent abdominal pain or low-grade fever without obvious cause).

FOLLOW-UP
Follow-up primary care visits are adequate discharge planning for most patients. Those with obvious structural causes (e.g., hemorrhoids, rectoceles) or high suspicion for causes such as spinal cord pathology, Hirschsprung disease, and other conditions, warrant specialty referral. Outpatient studies of colorectal structure (e.g., colonoscopy) are appropriate for those older than 50 years as cancer screening and are necessary for patients of any age with alarming signs or symptoms (acute and unexplained onset, weight loss, bleeding, iron deficiency anemia). However, structural studies do not provide an assessment of functional constipation, and few patients need functional studies; clinical response to treatment and further needs are better judged with ongoing primary care.

PATIENT EDUCATION
Patient education is crucial. Patients are often frightened and disturbed by symptoms that the physician may take lightly; reassurance and discussion are invaluable. As appropriate, the EP should explain that cancer or other serious disease is highly unlikely but that compliance with follow-up remains essential. The patient should be taught about “normal” bowel function, general measures to improve symptoms, and reasonable goals. The EP and nurse must also ensure that patients know how to use the items recommended, especially suppositories or enemas.

COMPLICATIONS AND PITFALLS
Although constipation is straightforward in most patients, certain potential pitfalls need to be avoided. Determination of exactly what the patient means by the word constipation is important, as are realistic goals for those with chronic constipation. Reassurance and patient education with specific treatment and follow-up instructions are essential in functional constipation cases, particularly in adults to avoid missing an opportunity for outpatient screening with early diagnosis of an underlying malignancy. Failure to recognize obstruction is often avoidable with serial reexaminations over a 4- to 6-hour period and by observing the patient after food intake. Unrecognized fecal impaction can lead to GI bleeding, mucosal ulceration, or even perforation; negative findings on rectal examination do not rule out a higher impaction, so plain radiographs are appropriate if suspicious. Overly aggressive digital disimpaction may lead to bacteremia; not all reachable stool pellets need to be removed at a single time when follow-up with PEG will clear the rest. Fever in an elderly patient is not explained by constipation. In children, a careful perirectal and rectal examination is difficult, but otherwise it is easy to overlook an anal fissure. In women of childbearing age (including perimenopausal), a pregnancy test is necessary, especially before consideration of a CT scan or outpatient radiographic colonic study.

SUGGESTED READINGS

REFERENCES
References can be found on Expert Consult @ www.expertconsult.com.
REFERENCES