The term constipation refers to a symptom or complex of symptoms and not a specific diagnosis. Patients and health care providers often define constipation differently. Most health care providers define constipation based on stool frequency. Patients often use the term constipation to describe a broad set of complaints, including straining, hard or infrequent stools, pain during a bowel movement, a feeling of incomplete evacuation, or abdominal bloating. Constipation may be acute (new for the patient) or chronic. Chronic constipation is defined as the presence of symptoms for at least 3 months. In clinical practice, attempting to identify the cause of the symptoms will often result in the best chance of effective treatment and will help determine disposition. A definitive diagnosis often is not possible in the emergency department (ED), and appropriate follow-up evaluation should be arranged in those cases. When constipation becomes severe with constant pain, some clinicians use the term obstipation. Obstipation represents the progression of the symptom of constipation toward bowel obstruction.

In the ED, the complaint of constipation should be of concern when it represents a significant change from a patient’s own normal pattern that is creating discomfort for the patient. This change may manifest as a decrease in frequency of defecation, sudden and persistent change in the character or amount of stools (especially decrease in stool caliber), blood in the stool, or problems expelling the stool.1

Epidemiology

The prevalence of constipation varies worldwide. In North America the prevalence is approximately 16%.2 In adults, constipation is more common in women, the elderly, those with high body mass index, and those with low socioeconomic status.2 A consistent trend of increasing prevalence of constipation is observed with age, with significant increases after the age of 70 years. The high prevalence among elderly patients is multifactorial and related to a diet low in fiber, sedentary habits, multiple medications, and various disease processes that impair neurologic and motor control.

Pathophysiology

Normally the gastrointestinal tract is presented with 9 to 10 l/day of secretions and ingested fluids. The small intestine usually absorbs all of this except for approximately 500 mL. The colon mixes the ileal effluent, ferments and salvages the unabsorbed carbohydrate residues, and desiccates the contents to form stool. The process of stool transport and evacuation is complex and is regulated by neurotransmitters, intrinsic colonic reflexes, and a multitude of learned and reflex mechanisms that are not fully understood. Constipation may result from structural, metabolic, mechanical, neurologic, or behavioral disorders that affect the colon or anorectum either directly or indirectly.1-5

DIAGNOSTIC APPROACH

Differential Considerations

The causes of constipation are numerous. Causes of constipation can be divided into primary (no apparent external cause) and secondary causes (summarized in Box 32-1). These two groupings have some overlap. In the ED, patients most commonly have acute constipation resulting from side effects of medications or avoidance of defecation secondary to presence of painful perianal lesions such as fissures, hemorrhoids, or perirectal abscesses.

Pivotal Findings

History

A thorough, detailed history usually identifies the most likely cause of the patient’s constipation. Defining what the patient means by “constipation” is a good starting point. Essential information includes the presence or absence of signs or symptoms that the American College of Gastroenterology terms “alarm symptoms.” These include fever, anorexia, nausea, vomiting, blood in the stool, anemia, weight loss of more than 10 lb, a family history of colon cancer, onset of constipation after the age of 50, and acute onset of constipation in an elderly patient.7

Additional elements of the history are directed toward elucidating a possible cause. Questions about the character of the stools may reveal a decrease in caliber of the stool, suggesting possible mass lesion, or diarrhea alternating with constipation, which may indicate irritable bowel syndrome. Frequency of stools and what the patient considers “normal” should be assessed.

The review of systems may need to include questions regarding associated symptoms if no obvious cause is elicited in the cursory history. Questions directed at associated neurologic symptoms, activity level, and status of comorbid diseases may provide clues to contributing factors.

A medication history is essential and should include any recent changes in dosage of any prescription medications, herbal agents, and over-the-counter (OTC) medications. Many patients experience constipation as a side effect of medication. Drugs of abuse also may cause changes in bowel patterns. Opioid medications are the most common cause of constipation among medications and drugs of abuse. Because of this, elderly patients who are prescribed...
Box 32-1 Causes of Constipation

**Congenital**
- Hirschsprung’s disease
- Imperforate anus
- Anorectal atresia
- Aganglionosis

**Primary Causes (e.g., Functional Disorders)**
- Idiopathic slow transit
- Irritable bowel syndrome

**Secondary Causes**

**Neurologic**
- Chronic diseases (multiple sclerosis, Parkinson’s disease)
- Spinal cord injury

**Metabolic**
- Diabetes
- Hypercalcemia
- Hypokalemia
- Hypothyroidism
- Hypomagnesemia

**Myopathies**
- Systemic sclerosis
- Amyloidosis

**Structural**
- Obstructing tumor or stricture
- Intussusception
- Rectocele
- Rectal prolapse

**Medication Side Effect (Most Common Listed Here)**
- Opiates
- Iron or calcium supplements
- Calcium channel blockers
- Antidepressants
- Diuretics
- Antipsychotics
- Anticholinergics
- Antiepileptics
- Antiparkinson drugs

**Psychological**
- Abuse (psychological, physical, sexual)
- Eating disorders (bulimia, anorexia nervosa)
- Affective disorders

**Others**
- Dehydration
- Immobility
- Pregnancy
- Postoperative pain
- Dietary factors


Opiates from the ED for home use should be warned about constipation and given instructions to prevent and treat it.

**Physical Examination**

The physical examination should initially focus on two major aspects: the abdominal and rectal examinations. The abdominal examination usually yields normal findings but may reveal tenderness, a mass, distraction, or possibly evidence of obstruction. Bowel sounds should be auscultated.

The anorectal examination and an evaluation of the stool are important parts of the physical assessment. Anorectal inspection may reveal fissures, hemorrhoids, or rectal prolapse. The digital rectal examination should include palpation for masses, and the presence or absence of pain should be noted. Other possible findings include strictures, high sphincter tone, and the presence of blood. Having the patient bear down may be helpful in assessing sphincter function and may reveal milder forms of prolapse. The quantity and the characteristics of the stool should be recorded. Testing the stool for occult blood may yield additional information, although straining with stooling can produce local anal lesions and bleeding. If results of occult blood testing are positive, diverticular disease, carcinoma, and trauma from repeated attempts at straining all are possibilities. Results of rectal examination have not been shown, however, to correlate with complaints of constipation or with evidence of colonic loading on abdominal radiographs. The rectal examination alone should not be used to confirm or exclude the presence of constipation.

**Ancillary Testing**

The majority of patients who visit the ED with a chief complaint of constipation do not need any testing. Plain abdominal radiographs may provide information about extent of stool retention but also may suggest emergent diagnoses such as megacolon or volvulus. Although constipation can cause cramping and abdominal pain, plain radiographs documenting an increased stool load in the constipated patient should not be used to rule out more serious underlying causative disorders, especially if the patient has a significant amount of abdominal pain or tenderness on examination. Also, several studies have shown that interpretation of abdominal films in the evaluation of constipation is highly variable and subjective.

Clinical laboratory studies are not routinely indicated in the workup for constipation. When blood is found in the stool, a hemoglobin level or complete blood count (CBC) may reveal an accompanying anemia, which may suggest an occult carcinoma. The white blood cell count is nonspecific and not helpful.

Patients with acute constipation for which the cause is not readily apparent should receive symptomatic treatment, with referral for outpatient evaluation and reassessment as needed. The patient in the ED with chronic constipation and no alarming signs or symptoms should receive empirical treatment without any ancillary testing. Outpatient tests may eventually include blood tests to investigate metabolic or endocrine causes and possibly specialized tests such as colonic transit studies and anorectal manometry. Consensus recommendations state that the routine use of colonoscopy to exclude organic disorders in patients with chronic constipation symptoms is not indicated, although it is still recommended for colon cancer screening in all patients older than 50 years.

**Diagnostic Algorithm**

The approach to the patient with constipation starts with assessing whether or not this symptom is accompanied by the additional symptom of abdominal pain. If such pain is present, the workup should be geared toward this symptom, which may ultimately reveal the cause of the constipation. Constipation may itself cause abdominal pain; however, this should be a diagnosis of exclusion once other, more serious potential causative disorders have been ruled out.

Figure 32-1 presents a diagnostic algorithm. If the physical examination reveals a structural or mechanical cause, such as pain from hemorrhoids, fissures, or mass lesion, the appropriate treatment or referral is indicated; the constipation will resolve once the cause is addressed. If no obvious cause is found on examination, then determination of the presence or absence of stool in the rectal vault may be helpful. History will be very helpful in differentiating...
among causes such as medication side effect and possible neurologic disease.

Constipation is rarely associated with morbidity or mortality. Most bad outcomes are a result of missed diagnosis of bowel obstruction or perforation. These conditions are generally diagnosed through physical examination, plain radiographs, and computed tomography (CT) scan if needed. Surgical consultation is needed for suspected perforation and obstruction.

**EMPIRICAL MANAGEMENT**

Treatment of acute constipation is directed toward eradicating the underlying cause and providing symptom relief. Prevention of further episodes of constipation may include recommending increased fluid intake, increased exercise, increased dietary fiber, and, if necessary, additional sources of bulk in the form of synthetic bulk agents. These interventions will not usually help the acutely constipated patient in the short term. Therapeutic choices and recommendations for patients should be customized based on patient preferences as well as history of efficacy of treatments used in the past. See Box 32-2 for further details. Specific recommendations may also include withholding a causal medication, management of an anal fissure, or draining of a perirectal abscess. Stool softeners (e.g., docusate sodium), although commonly recommended to patients, should not be used as a first-line agent for most patients with constipation. Docusate has not been shown to be any more effective than placebo in relieving acute constipation, although it may be somewhat helpful in patients with anal fissures or hemorrhoids, which can make defecation painful. Specific agents for symptomatic treatment of constipation are listed in Table 32-1. There are five classes of commonly used laxatives. These are bulking agents, osmotic salts, poorly absorbed sugars, stool softeners, and stimulant laxatives. These agents aid defecation by decreasing stool consistency and/or by stimulating colon motility. There are also several new pharmacologic classes being used or investigated for the treatment of constipation in specific groups of patients.

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**Figure 32-1.** Algorithmic approach to the diagnosis of constipation. ALS, amyotrophic lateral sclerosis; CHF, congestive heart failure; COPD, chronic obstructive pulmonary disease; CRF, chronic renal failure; CVA, cerebrovascular accident; GI, gastroenterology; IBD, inflammatory bowel disease; I&D, incision and drainage; MOM, milk of magnesia.
For specific agents, dosages, and precautions, see Table 32-1.

I. Core Program for All Patients
   A. Adequate intake of fluid and fiber is one key to preventing constipation. Fiber is available primarily from grains and bran cereals. Flatulence, bloating, and cramps are common side effects encountered when bran fiber is introduced.
   B. Another source of bulk is from synthetic bulk agents (e.g., psyllium). Bulk agents require an adequate amount of fluid intake; otherwise, they may worsen constipation.
   C. Avoid irritant laxatives as part of a core program because long-term use may decrease bowel motility. Encourage the patient to exercise and respond promptly to the urge to defecate.

II. Individualized Program-Specific Indications and General Comments
   A. Stimulant laxatives (e.g., senna, bisacodyl): Many believe that long-term use of these agents leads to dependency and habituation, but this is not substantiated. When used appropriately, these medications are not harmful and are very effective. Senna is probably the first-line choice among this class of laxatives.
   B. Osmotic laxatives (e.g., polyethylene glycol [PEG], lactulose, milk of magnesia, magnesium citrate): These agents are most commonly used for colonic preparation before bowel procedures. These agents are safe and well tolerated. PEG has been shown to be slightly more effective than lactulose and causes less bloating and flatus.
   C. Lubricants and stool softeners: Oral mineral oil lubricants and stool softeners are particularly helpful in patients who have acute painful perianal lesions. The softening and coating of the stool can make passage much easier and less painful, preventing constipation. Mineral oil is contraindicated in patients with swallowing problems or in those who are particularly debilitated, to prevent aspiration leading to lipid pneumonia.
   D. Suppositories and enemas: These agents may be helpful in patients who tend to have trouble expelling soft stool from the rectum. Glycerin suppositories may have a soothing effect and be helpful in patients with constipation caused by local, painful perianal lesions. Tap-water enemas are helpful when disimpaction is necessary.

### Table 32-1 Preparations Used in the Symptomatic Treatment of Constipation

<table>
<thead>
<tr>
<th>MEDICATION</th>
<th>MAXIMAL RECOMMENDED DOSE</th>
<th>ONSET OF ACTION</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bulk Laxatives</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Psyllium (Metamucil)</td>
<td>Titrate up to 20 g</td>
<td>12-72 hr</td>
<td>Natural fiber that undergoes bacterial degradation, which may contribute to bloating and flatus. Should be taken with plenty of water to avoid intestinal obstruction.</td>
</tr>
<tr>
<td>Methylcellulose (Citrucel)</td>
<td>Titrate up to 20 g</td>
<td></td>
<td>Semisynthetic cellulose fiber that is relatively resistant to colonic bacterial degradation.</td>
</tr>
<tr>
<td>Polycarbophil (Fibercon)</td>
<td>Titrate up to 20 g</td>
<td></td>
<td>Synthetic fiber of polymer of acrylic acid, resistant to bacterial degradation.</td>
</tr>
<tr>
<td><strong>Osmotic Laxatives</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magnesium hydroxide (milk of</td>
<td>30-45 mL once daily</td>
<td>1-6 hr</td>
<td>A small percentage of magnesium is absorbed—use caution in patients with renal insufficiency and in children.</td>
</tr>
<tr>
<td>magnesium)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magnesium citrate</td>
<td>150-300 mL as needed</td>
<td>3-6 hr</td>
<td>Hyperphosphatemia may result if patient has renal insufficiency. Commonly used before colonoscopy.</td>
</tr>
<tr>
<td>Sodium phosphate (Fleet</td>
<td>20-45 mL with 12 oz of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phospho-soda)</td>
<td>water as needed</td>
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<td></td>
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<tr>
<td><strong>Poorly Absorbed Sugars</strong></td>
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<td></td>
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<tr>
<td>Lactulose</td>
<td>15-30 mL once or twice a day</td>
<td>24-48 hr</td>
<td>Synthetic disaccharide not absorbed by the small intestine. Gas and bloating common.</td>
</tr>
<tr>
<td>Sorbitol</td>
<td>15-30 mL once or twice a day</td>
<td></td>
<td>Poorly absorbed by small intestine.</td>
</tr>
<tr>
<td>Polyethylene glycol and</td>
<td>17 g two or three times a day</td>
<td>12-24 hr</td>
<td>Organic polymers that are poorly absorbed and not metabolized by bacteria, thus may cause less bloating and cramping. Can be mixed with noncarbonated beverages.</td>
</tr>
<tr>
<td>electrolytes (GoLYTELY, MiraLax)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Stimulant Laxatives</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Senna (Senokot, Ex-Lax)</td>
<td>8-34 mg daily</td>
<td>6-12 hr</td>
<td>Stimulates secretion and motility of small intestine and colon.</td>
</tr>
<tr>
<td>Bisacodyl (Dulcolax, Correctol)</td>
<td>5-10 mg daily</td>
<td></td>
<td></td>
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</tbody>
</table>
Table 32-1  Preparations Used in the Symptomatic Treatment of Constipation—cont’d

<table>
<thead>
<tr>
<th>MEDICATION</th>
<th>MAXIMAL RECOMMENDED DOSE</th>
<th>ONSET OF ACTION</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stool Softeners</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Docusate sodium (Colace)</td>
<td>100 mg twice a day; some use higher doses</td>
<td>24-48 hr</td>
<td>Increase water penetration and soften stool. In many studies, no better than placebo. Not recommended as first-line or solo therapy.</td>
</tr>
<tr>
<td>Mineral oil (Fleet mineral oil)</td>
<td>5-15 mL orally at night</td>
<td></td>
<td>Provides lubrication for the passage of stool. Long-term use is not recommended. Lipid pneumonia can occur in patients predisposed to aspiration.</td>
</tr>
<tr>
<td>Newer Agents</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lubiprostone (Amitiza)</td>
<td>24 µg once or twice per day</td>
<td>1 hr</td>
<td>A chloride channel activator. FDA approved for treatment of chronic idiopathic constipation in adults. Adverse effects: headache, nausea, diarrhea.</td>
</tr>
<tr>
<td>M ethylnaltrexone (Relistor)</td>
<td>8-12 mg SQ</td>
<td></td>
<td>Used in refractory opioid-induced constipation.</td>
</tr>
</tbody>
</table>

FDA. U.S. Food and Drug Administration; SQ, subcutaneously.

A group of patients that often experiences constipation are those who are on chronic, medically necessary medications that cause constipation (e.g., opioids in patients with chronic pain or cancer). These patients should be on bowel regimens designed to prevent constipation. These regimens usually include such measures as high levels of dietary fiber (e.g., added prunes or figs) as well as daily administration of stimulant laxatives. A recent advance in the treatment of refractory opioid-induced constipation is methylnaltrexone (Relistor). Methylnaltrexone is a specific peripheral mu opioid receptor antagonist and is administered subcutaneously. It selectively blocks the gastrointestinal mu opioid receptors without compromising central mediated effects of opioid analgesia or precipitating withdrawal. Its use in palliative care patients was recently supported in a Cochrane review.

Enemas are sometimes necessary if laxatives have failed to provide relief or if the patient has a large volume of stool in the lower colon or rectum that cannot be expelled. Warm tap-water enemas are the safest choice. For immediate relief, manual disimpaction may be necessary in some patients, especially in elders with large amounts of stool present in the rectal vault. In rare cases, disimpaction may need to be performed with procedural sedation.

There are alternatives to the traditional laxatives and enemas for patients with chronic constipation. Patients with recalcitrant constipation may benefit from interventions such as biofeedback and bowel training.

**DISPOSITION**

Constipation is appropriately treated at home, and only the most severe cases require disimpaction or enema treatment in the ED. With complications or presence of a serious disorder as a cause for the constipation, such as fecal impaction beyond that able to be resolved by digital disimpaction, megacolon, volvulus, or bowel obstruction, the patient should be admitted to the hospital for further evaluation and treatment.

The references for this chapter can be found online by accessing the accompanying Expert Consult website.
References