# Management of Patients Presenting with Constipation

**Urgent message:** Constipation can be a sign of serious—even life-threatening—etiologies. Once non-benign causes have been ruled out, emphasis should be on evacuation and dietary and lifestyle changes to prevent recurrence.

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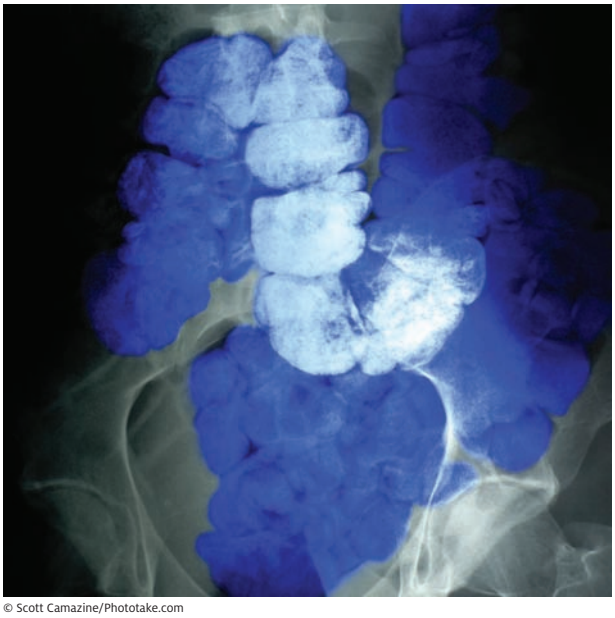
## INTRODUCTION

Constipation is a common complaint, accounting for approximately 2.5 million doctor visits annually. With increasing difficulty in obtaining a quick appointment with a primary care physician, more and more of these patients are utilizing urgent care facilities.



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Although it is most often seen in children, women, and patients over age 70, it is a reality that most people have experienced constipation at some time. It is a common and often benign complaint that is easy to disregard as a minor nuisance. Nevertheless, it is associated with a wide range of etiologies, including some serious problems; initiation of effective therapy must begin with their elimination as possible factors.

*Constipation* is defined as infrequent, firm, difficult-to-pass stools. *Obstipation* is the inability to pass either stool or flatus.

Since constipation is often a symptom of a more important underlying disease, it is necessary to clarify with the patient the actual characteristics, such as frequency, stool consistency, how these vary from normal for the patient, and other associated symptoms such as pain, bleeding, straining, nausea, vomiting, and weight loss.

As a sudden new symptom in a patient, constipation should raise the level of concern for non-benign etiologies and not be presumed to be an autonomous entity.

Ruling out serious and possibly life-threatening etiologies is imperative. However, without other concerning associated symptoms, empiric treatment and outpatient evaluation of constipation is generally appropriate.

Goals for treatment of functional constipation in urgent care focus on initial evacuation and prevention of recurrence. Education regarding dietary and lifestyle changes is often warranted.

**Table 1. Rome Criteria for Chronic Constipation[2]**

| | |
|---|---|
| Adults | ≥2 of the following for at least 12 weeks (not consecutive) in the preceding 12 months, and at least 6 months prior to diagnosis:<br>■ Straining during ≥25% of bowel movements<br>■ Lumpy or hard stools for ≥25% of bowel movements<br>■ Sensation of incomplete evacuation for ≥25% of bowel movements<br>■ Manual maneuvers to facilitate ≥25% of bowel movements (e.g., digital evacuation or support of the pelvic floor)<br>■ <3 bowel movements per week<br>■ Loose stools not present, and insufficient criteria for irritable bowel syndrome met<br>■ Sensation of anorectal obstruction or blockage ≥25% of the time |
| Infants and children | ■ Pebble-like, hard stools for most bowel movements for at least 2 weeks, or<br>■ Firm stools ≤2 times per week for at least 2 weeks and no evidence of structural, endocrine, or metabolic disease |

**Table 2. Additional Causes of Constipation[4]**

| | |
|---|---|
| Acute or subacute | ■ GI: obstructing cancer, volvulus, stricture, hernia, adhesion, pelvic or abdominal masses, inflammation<br>■ Medicinal: addition of new med (e.g., antipsychotic, anticholinergic, narcotic analgesic, antacids)<br>■ Environmental: change in defecation regimen (e.g., forced to use bedpan)<br>■ Exercise and diet: decrease in level of exercise, fiber intake, fluid intake |
| Chronic | ■ GI: slow-growing tumor, colonic dysmotility, paraplegia, cerebral palsy<br>■ Endocrine: diabetes, hypothyroidism, hyperparathyroidism<br>■ Rheumatologic: scleroderma<br>■ Toxicological: lead poisoning |

There are many treatment options available; unfortunately, good evidence for many of these remedies is lacking. The strongest evidence supports the efficacy of bulk-forming agents, such as psyllium, and osmotic agents, such as polyethylene glycol.[1]

Classically, chronic constipation has been defined by the Rome criteria as presented in **Table 1**.[2]

The definition of constipation can range from a patient's simple complaint of decreased bowel movement frequency to the gastroenterologists' more complex and specific Rome criteria.

## PATHOPHYSIOLOGY

Constipation is usually a multifactorial problem. It is often associated with low dietary fiber, inadequate fluid intake, and immobility or a sedentary lifestyle.

Changes in diet and daily routine such as travel, pregnancy, or other alterations in lifestyle can also lead to constipation. There is, however, minimal evidence in the literature regarding the actual contribution of many of these factors.[3]

Constipation can also be caused by medications—a most important offender being opiates—or pathological processes such as a mass or a stricture, as well as neurological and connective tissue disorders.

Often, infants are presumed to be constipated when they appear to be straining; this is referred to as infant dyschezia. This circumstance requires parental reassurance more than treatment.

In older children, the etiology is likely to involve toilet training, a change in diet, and disruption of bowel habits, such as entering school.

**Table 2** and **Table 3** show the myriad additional etiologies of constipation.

## DIAGNOSIS

*History*

Initially, it is important to determine exactly what the patient means by the complaint of "constipation." Some patients complain of constipation when they mean *obstipation*, and some use the term for a change in the consistency of the stool.

Clarify, to the extent possible, the actual frequency and the character of stools, and whether there is a dif-

ference from the patient's normal pattern. Try to differentiate between acute and chronic conditions. Inquire about the duration, frequency, and progression of symptoms.

Chronic constipation can be strictly defined by the Rome criteria, as previously noted, but may also be more loosely defined as symptoms lasting longer than three months.[5] Although chronic constipation is most commonly benign and can be treated empirically without an extensive work-up, it is important to determine what recent changes led the patient to seek care.

**Table 3. Medications Associated with Constipation**

- Anticholinergics
  - antihistamines
  - tricyclic antidepressants (TCAs)
  - phenothiazines
  - antiparkinsonian agents
  - antispasmodics
- Antacids, specifically non magnesium-containing types
- Antihypertensives
  - diuretics
  - calcium channel blockers
  - clonidine
- Opioids
- Sympathomimetics
  - ephedrine
  - phenylephedrine
  - terbutaline
- Laxatives
- NSAIDs
- Iron, phenytoin, barium, bismuth, sucralfate

Complaints of acute constipation are often worrisome for a diagnosis of bowel obstruction, but if this can be eliminated by assessment of presenting symptoms and imaging studies, most of the

**Table 4. Treatment Dosages**

| Medication | Adult | Pediatric |
|---|---|---|
| Psyllium & methylcellulose | 12-60 g/day | 7.5-15 g/day |
| Docusate | 50-360 mg/day | 25-180mg/day |
| Polyethylene glycol (PEG) | 17 g/day | 0.8 g/kg/day |
| Milk of magnesia (MOM) | 15-30 mL | 7.5-15 mL/day |
| Magnesium citrate | ½ to 1 full bottle (up to 300 mL) | 0.5 mL/kg, up to a maximum of 200 mL |
| Senna | 2-4 tabs/day | 2-6 years 0.5-1 tab<br>6-12 years 1-2 tabs |
| Bisacodyl | 8-15 mg PO<br>10 mg PR | 5-10 mg/day PO |

ensuing work-up can be done on an outpatient basis. Complaints that might raise concerns include:

- nausea and vomiting
- inability to pass flatus (suggestive of obstruction)
- abdominal pain
- fever
- hematochezia
- recent weight loss
- a history of a significant gastrointestinal (GI) disease, such as regional enteritis.

If a GI history is warranted, it should include:

- diet, including recent changes
- physical activity level
- history of similar complaints
- laxative use
- abdominal surgery
- diverticulosis
- irritable bowel syndrome
- inflammatory bowel disease
- family history of gastrointestinal disease

A complete review of systems may reveal concomitant diseases that are the actual cause of the complaint.

Pay attention to systemic complaints or other symptoms that the patient may not associate with the GI symptoms. For example:

- Cold intolerance, hair and skin changes, and fatigue suggest hypothyroidism that may be the actual cause.
- Weight loss may be due to a malignancy or malabsorption.
- Fatigue and pallor can be indicative of anemia.

Inquire about new medications and dosage changes, dietary changes, psychological factors such as work or family stress, and travel.

For pediatric patients, ask about alterations in formula, progression to solid foods, symptoms of painful defecation, toilet training, and entering school or daycare.

### Physical Examination

The patient should, overall, appear to be relatively well, with normal vital signs. Any abnormal vital signs should be investigated before narrowing the differential to constipation alone.

Evaluate the abdomen for evidence of tenderness, hernia, abdominal mass, distension, surgical scars, or peritoneal signs. Unfortunately, the abdominal examination is often normal even with a serious etiology present. Maintain a high index of suspicion when important historical features, as well as any abnormal abdominal examination features, are present.

A rectal examination is useful to detect rectal tumors, fecal impaction, rectal tone, gross or occult blood, fissures, and hemorrhoids.

### Diagnostics

Diagnostic studies for complaints of chronic symptoms are not needed emergently, and can be obtained by the primary care physician or gastroenterologist in follow-up.[6]

Exceptions would be patients with additional concerning acute symptoms, as previously mentioned. Studies useful under these circumstances include:

- hemoccult testing
- abdominal plain imaging studies to evaluate for obstruction (as demonstrated by air-fluid levels and distended loops of bowel) or stool burden
- computed tomography (CT scan) with and without contrast
- a complete blood count to evaluate for anemia
- metabolic panel or other chemistries to look for pancreatitis or hepatitis, as well as to assess hydration and renal function.

### Referrals

Typically, patients presenting with complaints confined to constipation with no indication of serious concomitant disease should be treated symptomatically, with referral to the primary care physician for follow-up for any diagnostic studies that may be indicated.

*"Many children suppress bowel movements for a variety of psychological reasons, such as resistance to overly enthusiastic toilet training, shyness, and power struggles with a parent."*

In addition to the tests listed previously, other studies might include colonoscopy, a barium enema, rectal barostatic testing, balloon expulsion testing, and even sacral nerve stimulation. Clearly, these are beyond the scope of an urgent care clinic and need to be obtained through follow-up.

## TREATMENT

The goal of treatment for isolated constipation in an urgent care setting focuses on an initial pharmaceutical bowel cleansing regimen followed by emphasis on adequate fiber and fluid intake, along with increased physical activity in order to maintain a regular bowel routine. (See **Table 4**).

If a reversible underlying cause is not apparent on initial presentation, follow-up is important to investigate and treat the primary etiology.

In cases of fecal impaction, manual disimpaction must be performed. Enemas often do not work well for impacted stool, and although the task is unpleasant for the medical personnel and painful for the patient, manual disimpaction may be the only method to start the patient back on the path of a normal regular bowel movement. This should be followed by medication, of which a bulk-forming fiber is usually tolerated the best.

If the patient has signs and symptoms of bowel obstruction, the patient will need evaluation in the ED, as well as a surgical consultation.

If possible on site while preparing for transfer, and if indicated, start IV fluid replacement with normal saline at a rapid bolus of 20 cc/kg for children and 100 cc to 500 cc total for adults, based on consideration of possible comorbidities, along with nasogastric decompression.

When discharging non-obstructed patients with medications, make sure they understand what signs and symptoms should prompt a return to an emergency department.

### Bulk-forming agents

These agents increase mass and stimulate peristalsis through distension of the colon. Options include psyllium (Metamucil), calcium polycarbophil (FiberCon), methylcellulose (Citrucel) and wheat bran. Only the efficacy of psyllium is adequately supported by evidence.[5]

All of these products require adequate fluid intake to be effective. Doses range from 15 g to 60 g of fiber with a recommended eight glasses of water daily.

Following initial treatment, dietary sources of fiber should be recommended for maintenance of regular bowel habits; these include whole grain breads and cereals, legumes, nuts, fruits, and vegetables.

### Emollients/Stool Softeners

Stool softeners such as docusate sodium (Colace) are also available but seem to be less effective than psyllium.[6]

Adverse effects of both bulk-forming agents and stool softeners appear to be minimal, but include bloating and cramping.

### Osmotic laxatives

Polyethylene glycol (PEG [Miralax]), lactulose, magnesium citrate, and magnesium hydroxide (milk of magnesia [MOM]) also have shown efficacy.[6] These agents draw fluid into the bowel, increasing colonic distension and stimulation of peristalsis.

PEG has been shown to be safe, and the most effective option, and is well tolerated in pediatric patients.[7-9] Adverse effects are generally mild, and include cramping and bloating.

MOM and magnesium citrate may cause electrolyte abnormalities (especially hypermagnesemia), particularly in children and patients with renal failure.

### Stimulants/irritants

Senna (Senakot, ex-lax) and bisacodyl (Dulcolax) stimulate gastrointestinal motility, as well as increase secretion of water. Risk of decreased motility due to a chronic effect on the myenteric plexus has been suggested and long-term use is generally not advised, but few studies have been able to demonstrate this consequence.[1]

Stimulants are not recommended for infants. They can be given to older children but are preferred for re-

fractory cases rather than initial treatment.[10]

Bisacodyl is also available in suppository form for patients unable to tolerate medications by mouth.

A mild non-pharmacologic but useful stimulant is stewed prunes. The patient may start with half a dozen, and increase daily consumption by six a day until bowel movements commence. They are also useful to help the patient retrain erratic bowel habits into having a bowel movement at a specific time of day.

### Enemas

Enemas, including warm water, work by causing colonic distension and by softening the stool. Sodium phosphate enemas (Fleet) also have an osmotic property and have the potential to cause water and electrolyte disturbances such as hyperphosphatemia and hypocalcemia.[11] This may be especially true in children and older patients with multiple comorbidities, such as renal dysfunction.[11,12]

Typically, enemas performed in the clinic setting are reserved for refractory or severe cases in conjunction with manual fecal disimpaction.

Enemas are also psychologically difficult for children, who often don't understand the purpose. Many children, especially young boys around the age of 3 to 6, voluntarily suppress their bowel movements for a variety of psychological reasons, such as resistance to overly enthusiastic toilet training, shyness about using toilets away from home, stubborn unwillingness to be toilet trained, and power struggles with a parent. They may view an enema as punishment, which could worsen the problem.

Alternatively, these children may benefit from prunes, along with positive reinforcement for having a successful bowel movement, and a careful avoidance of punishment for having an "accident." Often their peer group pressure at school is even more effective than the home forces in inducing toilet training.

### Lubricants

Lubricants such as mineral oil, taken by mouth, can be helpful when constipation is secondary to painful rectal lesions such as fissures or abscesses. Care in administration of these in children and in elderly patients with altered mentation is prudent to minimize the risk of aspiration of the mineral oil.

## DISPOSITION

Serious and immediate life-threatening etiologies should be considered; if they cannot be excluded in the urgent care clinic, the patient should be transferred to an emergency department.

Transfer and admission with surgical consultation is indicated for evidence of obstruction, as well as for systemic disease needing immediate evaluation or intervention.

Early follow-up is important for most other patients, such as those with evidence of systemic disease not requiring immediate attention, and for those patients with refractory symptoms.

Patients who are being discharged should be educated regarding reasons to seek medical attention immediately (such as increasing pain, vomiting, and other concerning symptoms listed previously), as well as lifestyle changes to prevent future problems.

Potential complications if symptoms continue untreated include prolapse of hemorrhoids, or the onset of inguinal or femoral hernias secondary to straining, anal fissures, rectal prolapse, fecal impaction, obstruction, intestinal pseudo-obstruction, megacolon, and sigmoid volvulus.

## SUMMARY

Constipation is a very common gastrointestinal complaint heard in the urgent care clinic. Identification of the etiology in this setting is not always possible, or practical. It is important to distinguish emergent disease processes from those that can be treated symptomatically and followed up on an outpatient basis. ■

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