How to manage chronic constipation in adults

In this article...

- Symptoms of chronic constipation
- How to assess the patient
- Treatment options for chronic constipation

Keywords: Constipation/ Women/ Chronic illness

This article has been double-blind peer reviewed

Abdominal pain can indicate constipation

In this article...

Symptoms of chronic constipation

How to assess the patient

Treatment options for chronic constipation

Author: June Rogers MBE, is team director and continence adviser, PromoCon.


Constipation is one of the most common gastrointestinal disorders encountered in clinical practice. Its prevalence increases with age and it is more common in the female population. Although often trivialised as a common and minor problem, chronic constipation is associated with considerable impairment of quality of life and is a significant burden on healthcare budgets. This article gives an overview of the management of constipation in adults, including assessment and treatment.

Constipation is a symptom complex, rather than a disease, and represents a subjective interpretation of a number of changes of bowel function. It is characterised by a number of symptoms including straining, passage of hard stools and infrequency, and is a common reason for GP consultations in adults. The national survey of morbidity in general practice in England and Wales found consultations for constipation were particularly common among the very young and the very old (McCormick et al, 1995) with prevalence of about 20% among older people living in the community and higher still among those in nursing homes.

A review of the incidence of constipation by Peppas et al (2008) reported a prevalence rate across Europe of up to 81%, with a mean value of around 17%. In 2001 12 million GP prescriptions were written for laxatives in England (Department of Health, 2001). A recent study by Sun et al (2011) found that patients with chronic constipation had a lowered quality of life, were less productive at work and had increased absenteeism compared with matched controls.

The diagnosis of constipation is often made according to the Rome III criteria, whereby at least two of the following symptoms have been present for at least three of the previous six months (Muller-Lissner, 2009):

- Straining at stool at least 25% of the time;
- Hard stools at least 25% of the time;
- A feeling of incomplete evacuation at least 25% of the time;
- A feeling of anal blockage at least 25% of the time;
- Manual manoeuvres for rectal emptying at least 25% of the time;
- Two stools or fewer per week.

Only a small proportion of patients with constipation seek medical advice, and those that do have often had the problem for months or even years.

Pathophysiology

The process of defecation involves the propulsion of stool through the colon to the rectum, the recognition of stool within the rectum, and the conscious act of defecation. The colon terminates in the rectum, which passes through the levator ani muscles and becomes the anal canal. Two groups of muscles encircle the anal canal: the internal anal sphincter (involuntary control) and the external anal sphincter (voluntary control). The nearly 90-degree angle formed at the junction of the rectum and the anal canal is also important; it straightens with flexion of the hips, a
Sphincter and the gluteal muscle. 

The decision is made on whether to go to the toilet and expel the stool by relaxing the external anal sphincter or to postpone defecation by contracting the external anal sphincter or impaired contraction of the internal anal sphincter (anus) during defecation. The prevalence is higher in women and may be linked to conditions such as prolapse or difficulties during childbirth. Patients often complain of excessive straining with a feeling of incomplete evacuation and the need to apply perineal or vaginal pressure to complete the evacuation. In some cases direct digital evacuation of the stool is necessary.

Causes of constipation

Constipation can occur for a number of reasons but is essentially due to an alteration in stool consistency or colonic motility or calibre. It can also occur if the decision to open the bowels is consistently ignored or delayed.

Chronic constipation is classified as functional (primary) or secondary. Functional constipation can be divided into normal transit, slow transit or outlet constipation. Possible causes of secondary chronic constipation include medication use, as well as medical conditions such as hypothyroidism or irritable bowel syndrome.

Slow-transit constipation

For practical purposes, constipation is generally caused by one of two mechanisms: obstruction of the movement of luminal contents or poor colonic propulsive activity. Obstruction of colonic flow may be caused by an anatomic or functional disorder. Poor propulsive activity (slow-transit constipation) may be caused by inhibition of motility (effects of a drug or metabolic disease) or diffuse nerve or muscle disease (such as multiple sclerosis or Parkinson’s disease).

Pelvic floor dysfunction

In pelvic floor dysfunction, colonic transit time may be normal and usually results in prolonged stagnation of bowel contents within the rectum. This may be caused by impaired relaxation of the internal anal sphincter or impaired contraction of the external sphincter (anus) during defecation. The prevalence is higher in women and may be linked to conditions such as prolapse or difficulties during childbirth. Patients often complain of excessive straining with a feeling of incomplete evacuation and the need to apply perineal or vaginal pressure to complete the evacuation. In some cases direct digital evacuation of the stool is necessary.

Assessment

Clarification of what the patient means by constipation is important as many individuals feel they are constipated because they do not open their bowels every day, even if they pass stools regularly with no apparent problem. Assessment should cover the nature of bowel movements (size, consistency, frequency) utilising the Bristol Stool Form chart and duration of the complaint.

Acute constipation is more often associated with organic disease than is chronic constipation. It is important to determine whether the patient has a history or signs and symptoms of a neurological, endocrine or metabolic disorder, or whether there are any “red flags” that would suggest an underlying gastrointestinal disorder. Important red flags include abdominal pain, nausea, cramping, vomiting, weight loss, any blood in the stool, rectal bleeding, rectal pain and fever (Tack et al, 2011).

During the assessment, the patient should be asked about dietary fibre intake, level of physical activity and use of medications, including over-the-counter drugs (for example, laxatives). The patient’s concerns should be elicited and a careful psychosocial history noted. It is also useful to evaluate the patient for signs of depression or anxiety as these are recognised as contributory factors. As constipation is known to also affect the activity of the bladder, assessment should include a review of the lower urinary tract (Averbeck and Madersbacher, 2011).

Physical examination

Physical examination is directed at identifying the underlying causes of constipation. The patient’s weight and overall nutritional status should be recorded, the skin checked for pallor and signs of hypothyroidism (such as reduced body hair, dry skin, fixed oedema), and the abdomen examined for masses, distension or tenderness. Rectal examination should include careful inspection and palpation for masses, anal and perianal fissures, inflammation and the presence of any hard stool. The colour and consistency of the stool should be noted.

Diagnosis

Diagnosis of constipation is initially based on history but if there is any cause for concern, or when basic interventions have failed to improve the constipation, more specific tests may be done – usually within secondary care or specialist centres. These tests include thyroid function tests, calcium concentration, barium enema or colonoscopy, defecation proctogram, ano-rectal manometry and colon transit time studies.

### Table 1. Medication for Treating Constipation

<table>
<thead>
<tr>
<th>Type of laxative</th>
<th>Action</th>
<th>Examples</th>
<th>Potential side-effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulk-forming laxatives</td>
<td>Increase faecal mass, stimulating peristalsis</td>
<td>Ispaghula husk</td>
<td>Flatulence and abdominal distension</td>
</tr>
<tr>
<td>Stimulant laxatives</td>
<td>Increase peristalsis and as a result can cause cramps</td>
<td>Bisacodyl, Senna, Sodium picosulphate</td>
<td>Abdominal pain and cramping, Loose stools with high doses</td>
</tr>
<tr>
<td>Osmotic laxatives</td>
<td>Increase the amount of water in the large bowel, either by drawing fluid from the body (lactulose) or by retaining fluid they were administered with (Movicol)</td>
<td>Lactulose, Movicol</td>
<td>Lactulose can cause flatulence and diarrhoea in higher doses</td>
</tr>
</tbody>
</table>

- **Bulk-forming laxatives**: Increase faecal mass, stimulating peristalsis; patients should be advised that the full effect may take days to develop. Particularly useful for people with small hard stools who cannot increase the fibre content of their diet.
- **Stimulant laxatives**: Increase peristalsis and as a result can cause cramps. Examples include Bisacodyl, Senna, Sodium picosulphate. Potential side-effects include abdominal pain and cramping, loose stools with high doses.
- **Osmotic laxatives**: Increase the amount of water in the large bowel, either by drawing fluid from the body (lactulose) or by retaining fluid they were administered with (Movicol). Examples include Lactulose, Movicol. Potential side-effects include flatulence and diarrhoea in higher doses.
Patients should be advised not to ignore urges to open their bowels and to adopt the correct toilet position with the knees slightly higher than the hips and the feet supported on a step if necessary (Sikirov, 2003). Using the gastrocolic reflex, particularly in the morning or after meals, should be encouraged. For those with a very sedentary lifestyle, particularly older people, increasing physical activity may be helpful (Vasanwala, 2009).

The effect of fluid intake on chronic constipation has been debated but there is little apparent evidence that increasing fluid has any benefit (Muller-Lissner et al., 2005). However, increased fluid intake may be beneficial for people who drink less than the recommended daily amount (2 litres).

Fibre is known to increase stool weight and shorten gut transit time; 20-30g per day is recommended. However, its role has been debated with some suggesting that increased fibre is not always helpful, particularly for people with symptoms such as abdominal distension and pain (Lambert et al, 2004). As such, any increase in fibre intake should be done slowly.

**Advances in drug therapy**

A range of types of laxatives is available (Table 1) to help treat constipation; choice is usually based on the type of constipation and the individual’s tolerance profile and preferences.

**Peripheral opioid-receptor antagonists:** Methylaltrexone is the only peripherally acting opioid-receptor antagonist currently licensed for the treatment of opioid-induced constipation in patients receiving palliative care. It is recommended when response to other laxatives is inadequate and it should generally be used only as an adjunct to existing laxative therapy. The drug binds to the same receptors as opioid analgesics (such as morphine) but acts as an antagonist, blocking the effects of those analgesics, specifically the constipating effects on the...
gastrointestinal tract (Thomas et al, 2008). As methylnaltrexone cannot cross the blood–brain barrier, it does not reverse the pain-killing properties of opioids or cause withdrawal symptoms.

**Serotonin agents:** A new treatment modality recently approved by the National Institute for Health and Clinical Excellence (2010) for chronic constipation in women is prucalopride. This selective 5-HT4 receptor agonist belongs to a group of medicines that enhance gut motility. Mucosal stimulation in the form of a meal usually stimulates the release of serotonin, which attaches to 5-HT4 receptors in the gut wall, resulting in coordinated contraction and relaxation of the smooth muscle of the gut – often called the peristaltic reflex. Prucalopride mimics serotonin and attaches to and stimulates the same 5-HT4 receptors, thereby increasing peristalsis, resulting in increased stool frequency and consistency (Tack et al, 2009).

Prucalopride is currently only recommended for women who have been unable to find adequate relief after using two laxatives from different classes at the highest tolerated recommended dose for at least six months (NICE, 2010). If prucalopride is not effective after four weeks, the woman should be reviewed and the benefit of continuing treatment considered. Prucalopride can be used in combination with laxatives if necessary. NICE also states that it should only be prescribed by a clinician who has experience of treating constipation and who has carefully reviewed the woman’s treatment history.

**Other treatments**

**Biofeedback:** This can improve bowel function by encouraging the correct use of pelvic floor muscles and internal and external sphincters during defeacation (Wald, 2007). It appears to be more effective in people who have problems with evacuation rather than slow-transit constipation (Rao et al, 2010). Success with biofeedback has been reported at 50-90% (Heymen et al, 2003).

**Rectal irrigation:** This involves instilling lukewarm water into the rectum via a rectal catheter, which is secured by an inflated balloon, or a cone that is manually held in place while the patient sits on the toilet. The fluid distends the rectal wall progressively and normal rectal dynamics stimulate the stretch receptors to initiate the urge to defecate. Once the catheter or cone is removed, the water and any stool in the rectum empties into the toilet. The frequency and duration of the irrigation varies depending on individual needs.

After the introduction of the Peristeen® irrigation kit (Coloplast) in 2007, rectal irrigation (also known as transanal irrigation) is increasingly offered as an alternative to the limited range of options to manage intractable chronic constipation (Muller-Lissner S et al, 2005). A range of treatment options should be offered depending on the individual’s presenting symptoms; Fig 1 outlines suggested treatments.

**Conclusion**

Although constipation is often regarded as simply infrequent bowel movements associated with hard stools, it is a multifactorial symptom complex that can vary in intensity, necessitating an individualised approach to care. Assessment of patients’ symptoms is an important step in developing targeted treatment plans. New and emerging treatments are likely to fill an important void for many patients, particularly those in whom the condition has become chronic and for whom previous interventions have failed.

**References**


