

THE CAUSES AND TREATMENT OF CONSTIPATION

Constipation is a symptom not a disease and as such always has an underlying cause. Bowel habit is directly affected by lifestyle and this article will outline simple measures that can promote normal bowel function. Healthcare workers are in a strong position to improve the management of constipation by implementing simple steps and providing patients with appropriate advice.

Deborah Rigby is a Continence Advisor at Bristol Primary Care Trust; Marlene Powell is an Independent Continence Nurse Specialist in Bath

Constipation can be a result of many factors, including diet, lack of exercise, poor fluid intake, busy lifestyle and ignoring the urge to defecate. Constipation is one of the most common gastrointestinal complaints in the UK, and at one time or another, almost everyone will experience it. In most cases, constipation is temporary and not serious. Understanding its causes, prevention, and treatment will help most people find relief.

THE FACTS

Although rarely life-threatening, constipation can cause misery and discomfort for sufferers and it is estimated that 2–20% of people eating a Western diet experience it at some time (Cook et al, 1999). Many people look for a quick-fix remedy with over-the-counter treatments and laxative prescriptions – the cost to the NHS has been suggested as £47m (Petticrew, 1997).

There are often uncomfortable side-effects and self-reported constipation in older people can be associated with anxiety and depression. For frail elderly patients, serious complications in the presence of other medical problems may even be the reason for admission to hospital.

DEFINITION

There is a wide variation in what is considered 'normal' bowel habit and many people assume that a daily bowel movement is necessary. It is, therefore, difficult to apply a rigid set of criteria to constipation as it is a very subjective experience. The 'Rome 2' diagnostic criteria is one of the most commonly accepted definitions and widely used in practice (Thompson et al, 1999) (*Table 1*).

'There is a wide variation in what is considered "normal" bowel habit and many people assume that a daily bowel movement is necessary.'

Acute constipation is defined as a recent onset in a person whose bowel habit was previously normal – chronic constipation is where

persistent episodes recur when acute treatment stops.

What is a 'normal' bowel action?

The bowel is part of the digestive system that digests food, absorbs nutrients into the bloodstream and expels waste products from the body. This process starts in the mouth, passes down to the stomach, through the small and large bowel (the colon) and terminates in the rectum and anus. Food usually takes 1–3 days to complete the process and up to 90% of that time is spent in the colon (Norton and Kamm, 1999).

A 'normal' bowel action can be anything from several times a day to once every few days. Many factors influence frequency, but as long as the stool is excreted without pain, undue straining, urgency or use of laxatives it can be regarded as normal.

What goes wrong?

As food moves through the colon, it absorbs water while forming waste products (stool). Muscle contractions in the colon push the stool toward the rectum. By the time stool reaches the rectum it is solid as most of the water has been absorbed. The hard and

Table 1

The 'Rome 2' diagnostic criteria

Constipation is defined as demonstrating two or more of the following symptoms:

- Straining for at least a quarter of the time
- Lumpy/hard stool for at least a quarter of the time
- A sensation of incomplete evacuation for at least a quarter of the time
- Two or fewer bowel movements a week

dry stools seen in constipation occur when the colon absorbs too much water or if the colon's muscle contractions are slow or sluggish, causing the stool to move through the colon too slowly. Many lifestyle factors and conditions can exacerbate constipation (*Table 2*).

LIFESTYLE FACTORS INFLUENCING CONSTIPATION

Lack of fibre

The most common cause of constipation is a diet low in fibre (found in vegetables, fruits, and whole grains) and high in fats (found in cheese, eggs, and meats). People of all ages are at risk of constipation, but those who eat plenty of high-fibre foods are less likely to develop the condition (*Table 3*).

To prevent constipation, the diet should contain a balance of both soluble and insoluble fibre (the part of fruits, vegetables, and grains that the body cannot digest). Soluble fibre dissolves easily in water and takes on a soft, gel-like texture in the intestines, whereas insoluble fibre passes through the intestines almost unchanged. The bulk and soft texture of fibre helps prevent hard, dry stools that are difficult to pass.

Poor fluid intake

Liquids like water and juice add fluid to the colon and bulk to the stools, making bowel movements softer and easier to pass. Sufferers of constipation should drink about eight glasses of appropriate fluid per day.

As those suffering from constipation often take bulk-forming laxatives, it must be stressed that fluid intake must be increased accordingly as there could be a risk of abdominal obstruction. Liquids that contain caffeine (coffee and cola drinks) and alcohol have a dehydrating effect. Many people choose to restrict their fluid intake for a variety of reasons (*Table 4*).

Lack of exercise

Sullivan (1994) reported better than average defecation patterns in runners, however, many situations can compromise mobility, including:

- » Illness
- » Depression/apathy
- » Pain, e.g. arthritis
- » Moving into care
- » Institutionalisation.

Lack of exercise is thought to lead to constipation and old age possibly increases the risk of functional disability (poor mobility in particular). Immobile patients are more at risk of chronic constipation with or without faecal incontinence, and a combined approach of activity and diet has been shown to reduce laxative use in elderly patients (Leung, 2007).

Medications

Symptoms of both acute and chronic constipation can arise through taking medicines to

alleviate or prevent other conditions (*Table 5*). Those taking five or more medications concurrently are particularly at risk (Potter et al, 2002). Older people in nursing homes are particularly at risk and Harari (2002) found an average of six prescribed medicines being taken daily by nursing home residents. Review of medications likely to cause constipation is therefore essential.

TREATING CONSTIPATION: BREAKING THE CYCLE

Although treatment depends on the cause, severity, and duration of constipation, in most cases dietary and lifestyle changes will help relieve symptoms of constipation and help to prevent it. However, it is important to carry out a simple assessment to ascertain the severity of the condition (*Table 6*).

Lifestyle changes

A diet with enough fibre (20–35 grams each day) helps to form soft, bulky stool. Recent studies illustrate the benefits of linseed seeds as a natural way of 'bulking' the stools (Puffett, 2003). Linseed seeds are available in most health food stores and patients are advised

Table 2

Common causes of constipation

- Lack of fibre in the diet
- Poor fluid intake
- Lack of exercise/poor mobility
- Medications, including abuse of laxatives
- Irritable bowel syndrome
- Changes in life or routine such as pregnancy, older age, and travel
- Ignoring the urge to have a bowel movement
- Specific diseases such as stroke
- Problems with the colon and rectum, e.g. cancer

Table 3**Dietary issues that can cause constipation**

The Western diet often lacks fibre
Meals that are missed or not taken regularly
Badly fitting dentures and poor appetite

to start with one tablespoon daily, increasing to a maximum of three tablespoons. It is always advised to increase fluid intake in line with an increase in fibre.

Other changes that can help treat and prevent constipation include drinking enough water and other liquids, such as fruit and vegetable juices and clear soups, engaging in daily exercise, and making enough time to have a bowel movement. In addition, the urge to have a bowel movement should not be ignored.

Laxatives

Most people who are mildly constipated do not need laxatives. The *Nurse Prescribing Formulary* recommends general avoidance of laxatives, except where straining will exacerbate a condition, such as angina, or increase the risk of rectal bleeding, for example, in haemorrhoids (Department of Health, 2008). Laxatives are considered of value in drug-induced constipation but prolonged treatment is not encouraged. Laxatives taken orally are available in liquid, tablet, gum, powder, and granule forms. Some are administered rectally. They work in various ways, including:

- ▶▶ Bulk-forming laxatives are generally considered the safest but can interfere with absorption of some medicines. These laxatives, also known as fibre supplements, are taken

with water. They absorb water in the intestine and make the stool softer

- ▶▶ Stimulants cause rhythmic muscle contractions in the intestines
- ▶▶ Stool softeners provide moisture to the stool and prevent dehydration. These laxatives are often recommended after childbirth or surgery
- ▶▶ Osmotic laxatives act like a sponge to draw water into the colon for easier passage of stool.

OTHER TREATMENTS**Biofeedback**

Sufferers of chronic constipation that has become resistant to laxatives may be offered biofeedback. Specialist continence nurses and physiotherapists provide this procedure in both acute and community sectors. Often described as 'behavioural' treatment, it is a therapy designed to retrain the muscles that control bowel movements (Horton, 2004).

Biofeedback can take place in a clinic or at home. A rectal sensor monitors muscle activity, which is then displayed on a computer screen, allowing for an accurate assessment of bodily functions. Biofeedback is a learning strategy aimed at relaying to the patient in real time the normally subconscious physiological function of defaecation. It is hoped that this can help patients understand and better control defaecation.

Complementary therapies

Many therapies are said to have potential benefits for sufferers of

constipation including:

- ▶▶ Massage, particularly abdominal massage
- ▶▶ Acupuncture
- ▶▶ Reflexology
- ▶▶ Homeopathy
- ▶▶ Aromatherapy
- ▶▶ Herbalism.

The use of herbalism is a particularly logical theory as many laxatives are derived from plants. Those known to have beneficial properties include asparagus, aloe, figs, prunes, rhubarb, linseed and walnuts.

Surgery

Colectomy (the surgical resection of any extent of the large bowel) or partial colectomy can be an option for people with slow-transit constipation (Emmanuel, 2002). However, the benefits of this surgery must be weighed against possible complications. Some patients are managed with an ileo-rectal pouch and others with a stoma.

Complications of constipation

Sometimes constipation can lead to complications, including haemorrhoids caused by straining to have a bowel movement, or anal fissures caused when hard stool stretches the sphincter muscle. As a result, rectal bleeding may occur and this will appear as bright red streaks on the surface of the stool.

Table 4**Situations that affect fluid intake**

Fluid restrictions, e.g. to prevent urinary incontinence
Use of diuretics
Nocturia and urinary incontinence
Restricted mobility
Excessive alcohol intake

Table 5

Medications that can cause constipation

- Pain medications (especially narcotics)
- Antacids that contain aluminium and calcium
- Blood pressure medications (calcium channel blockers)
- Antiparkinson drugs
- Antispasmodics
- Antidepressants
- Iron supplements
- Diuretics
- Anticonvulsants

Sometimes, straining causes rectal prolapse and may lead to secretion of mucus from the anus. Usually eliminating the cause of the prolapse, such as straining or coughing, is the only treatment necessary. Severe or chronic prolapse requires surgery to strengthen and tighten the anal sphincter muscle or to repair the prolapsed lining.

Constipation may also cause hard stool to pack the intestine and rectum so tightly that the normal pushing action of the colon is not enough to expel the stool. This condition, called faecal impaction, occurs most often in children and

Table 6

Assessment for constipation

- Assessment should include:
- The number of weekly bowel movements
 - Stool consistency (as per Bristol stool chart [see p113])
 - Any straining/pain
 - Duration of constipation
 - Episodes of incontinence (faecal/urinary)
 - Rectal pain/bleeding
 - Laxative use – prior/current
 - Diet and fluid intake
 - Mood and cognition
 - Mobility problems
 - Any other medical problems

older adults. With the advent of newer medications and improved bowel care strategies, the need for disimpaction or manual evacuation of faeces is greatly reduced.

CONCLUSION

Constipation has often been viewed as a disease, but each time a laxative is prescribed without proper investigation, a health promotion opportunity is lost. Healthcare workers should take every opportunity to address simple lifestyle interventions that can make a significant difference to patients' quality of life. **CE**

REFERENCES

Cook T, Frall S, Gough A, Leonard L (1999) The conservative management of constipation in adults. *J Assoc Chartered Physio* **85**: 24–8

Department of Health (2008) *Nurse Independent Prescribing*. Available at: <http://www.dh.gov.uk/en/Healthcare/Medicinespharmacyandindustry/Prescriptions/TheNon-MedicalPrescribingProgramme/Nurseprescribing/index.htm> (accessed 24/2/08)

Emmanuel A (2002) The use and abuse of laxatives in older people. In: Potter J, Norton C, Cottenden A (Eds) *Bowel Care in Older People*. Royal College of Physicians, London

Harari D (2002) Epidemiology and risk factors for bowel problems in older people. In: Potter J, Norton C, Cottenden A (Eds) *Bowel Care in Older People*. Royal College of Physicians, London

Horton N (2004) Behavioural and biofeedback therapy for evacuation disorders. In: Norton C, Chelvanayagam S (Eds) *Bowel Continence Nursing*. Beaconsfield Publishers, Beaconsfield

Key Points

- » Constipation can be a result of many factors, including diet, lack of exercise, poor fluid intake, busy lifestyle and delaying the urge to defecate.
- » Constipation is one of the most common gastrointestinal complaints in the UK, and at one time or another, almost everyone will experience it.
- » In most cases, constipation is temporary and not serious.
- » Understanding its causes, prevention, and treatment will help most people find relief.

Leung FW (2007) Etiologic factors of chronic constipation: review of the scientific evidence. *Dig Dis Sci* **52(2)**: 313–6

Norton C, Kamm M (1999) *Bowel Control Information and Practical Advice*. Beaconsfield Publishers, Beaconsfield

Potter J, Norton C, Cottenden A (2002) *Bowel Care in Older People*. Royal College of Physicians, London

Petticrew M (1997) Treatment of constipation in older people. *Nurs Times* **93(48)**: 55–6

Puffett N (2003) The use of linseed: managing constipation naturally. *J Comm Nurs* **18(6)**: 10–13

Sullivan SN, Wong C, Heidenheim P (1994) Does running cause gastrointestinal symptoms? A survey of 93 randomly selected runners compared with controls. *NZ Med J* **107(984)**: 328–31

Thompson WG, Longstreth GF, Drossman DA et al (1999) Functional bowel disorders and functional abdominal pain. *Gut* **45**: 1143–7