Factsheet
Constipation

CPPE
CENTRE FOR PHARMACY POSTGRADUATE EDUCATION

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NHS Health Education England
MANCHESTER 1824 The University of Manchester

Definition

Constipation is a disorder where a person passes infrequent stools, has difficulty passing stools, or experiences sensation of incomplete emptying. Previously constipation has been defined as less than three spontaneous bowel movements per week. It is now commonly defined as passage of stools less frequently than the person's normal pattern.[1]

Constipation becomes chronic if it occurs for 12 weeks or more in the preceding six months. If constipation goes untreated, this can lead to faecal loading or impaction where spontaneous evacuation is unlikely. Overflow faecal incontinence can happen as a result. This is where stool leaks around the impaction and may be passed without sensation,[1] which is also known as 'faecal impaction with overflow'.

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Prevalence and incidence

Constipation occurs more frequently in women than men and is more common with increasing age.

The UK prevalence of GP diagnosed constipation is 12.8 per 1000 people, with rates increasing within institutional settings; over 50% of those living in nursing homes are affected.[2]

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Signs and symptoms

In addition to infrequent stools, adults may complain of a stomach ache and feel bloated or sick.

Children will demonstrate similar signs and symptoms to adults, and constipation might be suspected if they have a poor appetite or stomach pain that improves after defecating. They may also soil their clothing if they develop overflow.[3]

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Causes/risk factors

The National Institute for Health and Care Excellence (NICE) clinical knowledge summary *Constipation* lists the following risk factors for developing constipation:

Social

- Low fibre diet or low calorie intake
- Difficult access to toilet, or changes in normal routine or lifestyle
- Lack of exercise or reduced mobility
- Limited privacy when using the toilet
- Low educational levels or socio-economic deprivation
- A family history of constipation.

Psychological

- Anxiety and/or depression
- Somatisation disorders
- Eating disorders
- History of sexual abuse.

Physical

- Female sex
- Older age
- Pyrexia, dehydration or immobility
- Sitting position on a toilet seat compared with the squatting position for defecation.

This clinical knowledge summary goes on to describe the following secondary causes:

Medicines	**Organic causes**
• Aluminium-containing antacids • Iron or calcium supplements • Analgesics, eg, opioids/opiates and non-steroidal anti-inflammatory drugs (NSAIDs) – a rare side effect • Antimuscarinics • Antidepressants, eg, tricyclic antidepressants • Antipsychotics, eg, amisulpride, clozapine, or quetiapine • Antiepileptic drugs, eg, carbamazepine, gabapentin, oxcarbazepine, pregabalin, phenytoin • Antihistamines, eg, hydroxyzine • Antispasmodics, eg, dicycloverine or hyoscine • Diuretics • Calcium-channel blockers	Endocrine and metabolic diseases • ***Diabetes mellitus*** (with autonomic neuropathy [nerve damage]) • Hypercalcaemia (elevated calcium levels) and hyperparathyroidism (hypercalcaemia is often caused by hyperparathyroidism) • Hypermagnesaemia (elevated magnesium levels) • Hypokalaemia (low potassium levels) • ***Hypothyroidism*** • Uraemia (excess blood urea and creatinine) Myopathic conditions (conditions which affect the muscles) Neurological conditions, eg, ***stroke***, multiple sclerosis, ***Parkinson's disease*** and spinal cord injury or tumours. Structural abnormalities • Anal fissures, strictures, haemorrhoids • Colonic strictures (narrowing of the colon) • ***Inflammatory bowel disease*** • Obstructive colonic mass lesions (for example, due to colorectal ***cancer***) • Rectal prolapse or rectocele (bulging of the rectum into the vagina) • Postnatal damage to pelvic floor or third degree tear

Other

- Irritable bowel syndrome
- Slow transit constipation (reduced motility of the large intestine)
- Pelvic or anal dyssynergia (disruption in muscle co-ordination)[3]

For more information about clozapine and constipation access the Medicines and Healthcare products Regulatory Agency (MHRA) article ***Clozapine: reminder of potentially fatal risk of intestinal obstruction, faecal impaction, and paralytic ileus***.

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Pathophysiology (mechanism of disease)

For a brief introduction to how constipation occurs, watch the following video:

TedEd – What causes constipation?

For more information on the pathophysiology of constipation, and in particular the pathophysiology of constipation in the older adult, access the following *World Journal of Gastroenterology* article, **Pathophysiology of constipation in the older adult**.

For more information about the pathophysiology of chronic constipation, read the following *Canadian Journal of Gastroenterology* article, **The pathophysiology of chronic constipation**.

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Prognosis and complications

Chronic constipation itself is treatable and can improve with appropriate lifestyle changes and laxative treatment.

Complications of **chronic** constipation include:

- progressive faecal retention, distension of the rectum, and loss of sensory and motor function
- faecal loading and impaction
- haemorrhoids or anal fissure.[4]

For more information about these complications, watch the following videos:

Haemorrhoids

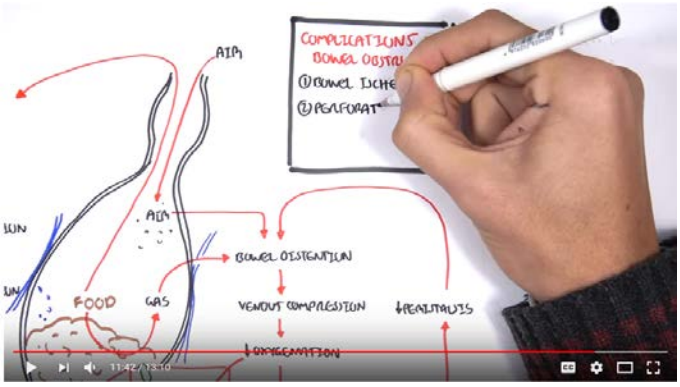
Anal fissures

Complications of chronic faecal loading and impaction include:

- faecal incontinence
- chronic dilation of the colon may cause megacolon (dilation of the colon in the absence of a mechanical obstruction)
- recurrent urinary tract infections, obstructive uropathy (obstruction of urine flow which can lead to renal dysfunction)
- rectal bleeding
- rectal prolapse (part of the rectum protruding through the anus)
- bowel obstruction, perforation, or ulceration (constipation is also a symptom of bowel obstruction).

To learn more about bowel obstruction watch the following video:

Bowel obstruction – Causes and pathophysiology



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Diagnosis/detection

Visit the NICE clinical knowledge summary pages, ***Constipation - Diagnosis - When should I suspect constipation?*** and ***Constipation – Assessment - How should I assess an adult with constipation?*** for information about how constipation is diagnosed and assessed.

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Non-pharmacological treatment

Non-pharmacological treatment should be offered before pharmacological treatment.

The main non-pharmacological treatment is the provision of the following advice:

- gradually increase fibre intake[6]
- ensure an adequate fluid intake[7]
- increase exercise levels[8]
- develop a toilet routine, eg, consider accessibility and privacy.

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Pharmacological treatment

After non-pharmacological treatments have been offered, laxatives can be offered to treat constipation. If appropriate, also consider stopping current medicine which may be causing constipation.

Laxatives increase the frequency of stools and make them easier to pass. Some laxatives increase the water content of the stools; this can be done by causing water to move into the stools or by increasing stool transit time and therefore reducing the amount of water that is absorbed.

There are several different types of laxatives:

Bulk forming – these are made of soluble fibre, and work by increasing faecal mass and softness due to water retention; this action promotes peristalsis. They take approximately 72 hours to work. Adequate fluid intake must be maintained to avoid intestinal obstruction[9] and, therefore, these aren't the first choice of laxative for older people. This group includes ispaghula husk, methylcellulose and sterculia.

Osmotic laxatives – cause fluid to move into the large bowel producing distension; this leads to increased peristalsis. This group includes lactulose and macrogols (which also have stool-softening properties), and phosphate and sodium citrate enemas.

Stimulant laxatives – increase peristalsis by stimulating colonic and rectal nerves. This group includes senna which works on the colon, bisacodyl and sodium picosulfate which work on the colon and rectum, and the weak stimulant, docusate, which functions to reduce the surface tension of the stool, allowing water to penetrate and soften it.[10]

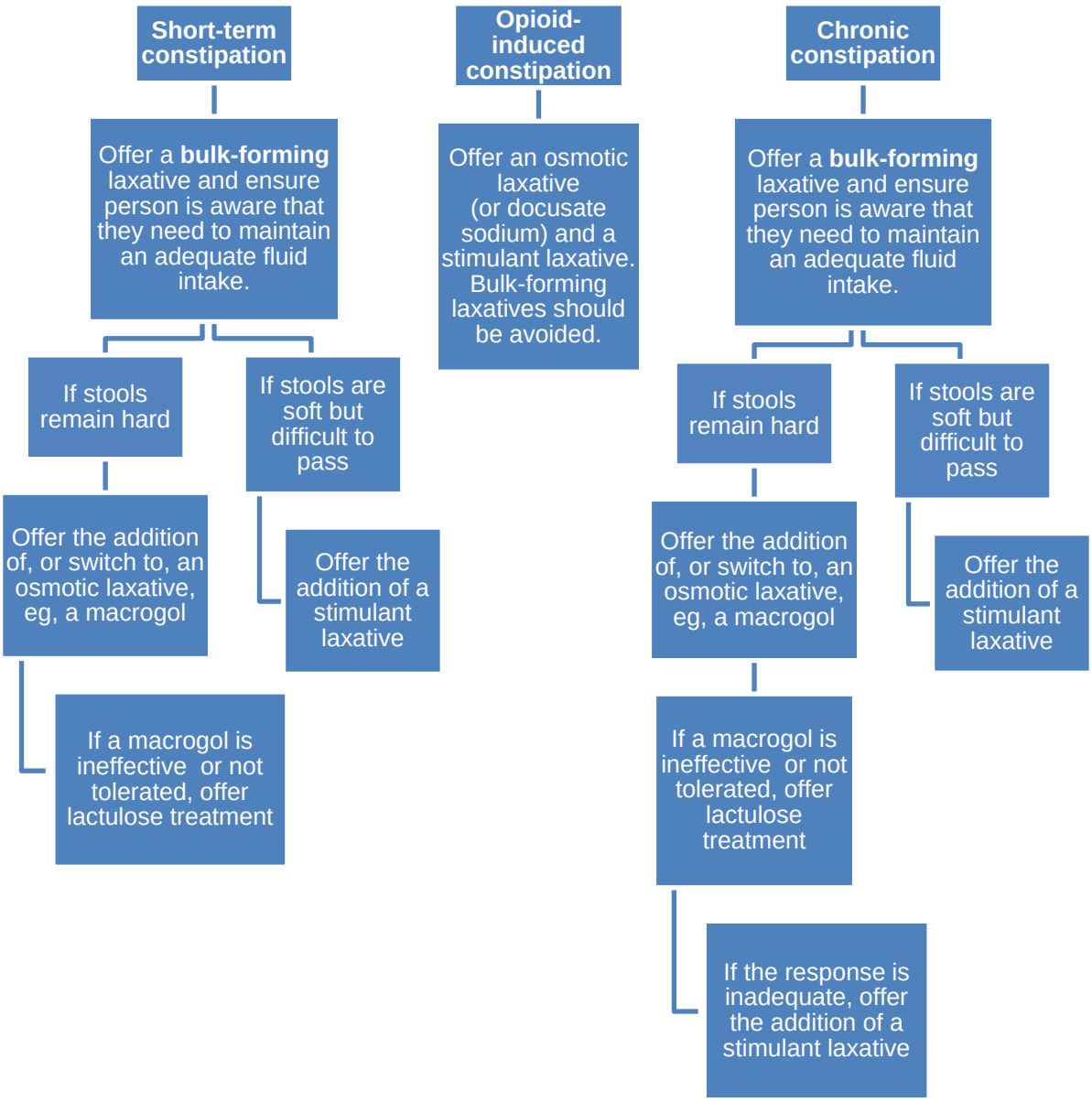
Prokinetic laxatives – include prucalopride which is a selective, high-affinity, serotonin (5HT4) receptor agonist, which stimulates intestinal motility.[11]

Secretory laxatives – including lubiprostone, a chloride-channel activator, which acts locally to increase intestinal fluid secretion and improve colon transit.[10,12]

Other laxatives may be initiated by a specialist and may require ongoing prescribing through their surgery:

- linaclotide - for IBS-related constipation
- naldemedine, naloxegol and methylnaltrexone for opioid-induced constipation.

The initial management of constipation with laxatives is outlined in the below diagram based on recommendations in the British National Formulary (BNF) *Constipation*[9] and NICE clinical knowledge summary *Constipation.*[13]



For more information about next steps and faecal impaction, visit the BNF ***Constipation*** and NICE clinical knowledge summary ***Constipation***.

For information about reducing the number of laxatives that are prescribed, read *Section 1.2, Laxatives* of the All Wales Medicines Strategy Group (AWMSG) document ***Polypharmacy Supplementary Guidance – BNF Sections To Target***.

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Patient support

The NHS has the following page dedicated to ***constipation*** which includes a video, *How to treat constipation*.

The Association of UK dieticians has produced Food Fact Sheets on ***fibre*** and ***fruit and vegetables***.

Public Health England has produced ***The Eatwell Guide - Helping you eat a healthy, balanced diet***.

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Further resources

PrescQIPP offers the following recommendations with regard to constipation, ***Constipation - Bulletin 137, June 2016*** (non-subscriber resource) or **Constipation - Bulletin 272 October 2020** (subscriber resource).

The Northern Ireland Centre for Pharmacy Learning and Development (NICPLD) has produced ***Lower GI: functional bowel disease*** e-learning. It gives an overview of common disorders, including constipation, which manifest as alterations in normal bowel functioning.

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External websites

CPPE is not responsible for the content of any non-CPPE websites mentioned on this page or for the accuracy of any information to be found there.

All web links were accessed on 16 September 2022

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References

1. National Institute for Health and Care Excellence. Clinical knowledge summary. ***Constipation – Definition.*** September 2021.
2. National Institute of Health and Care Excellence. Clinical knowledge summary. *Constipation: How common is it?* September 2021.
3. NHS. *Constipation in children.* February 2020.
4. National Institute for Health and Care Excellence. Clinical knowledge summary. *Constipation: What are the complications?* September 2021.
5. National Institute for Health and Care Excellence. Clinical knowledge summary. ***Constipation – Complications***. September 2021.
6. NHS. ***Eat well – How to get more fibre into your diet***. August 2018.
7. NHS. ***Eat well – The Eatwell Guide***. January 2019.
8. NHS. ***Live well – Exercise***. October 2019.
9. British National Formulary. ***Constipation – Treatment summary***.
10. ResourcePharm. ***Over-the-counter (OTC) laxatives for constipation***.
11. British National Formulary. ***Prucalopride***.
12. National Institute for Health and Care Excellence. Clinical knowledge summary. ***Constipation: Choice of laxatives.*** September 2021.
13. National Institute for Health and Care Excellence. Clinical knowledge summary. ***Constipation - Scenario: Constipation in adults***. September 2021.

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Last review: September 2022
Next review due: September 2023