Vale of York Clinical Commissioning Group

Referral Support Service

General Surgery / Gastroenterology

GS16
Constipation Pathway (adults)

Definition

The BNF defines constipation as defaecation that is unsatisfactory because of infrequent stools, difficult stool passage, or seemingly incomplete defaecation. It can occur at any age and is commonly seen in women, the elderly, and during pregnancy.

It is important for those who complain of constipation to understand that bowel habit can vary considerably in frequency without doing harm. Some people erroneously consider themselves constipated if they do not have a bowel movement each day.

Red flags

- New onset constipation especially in patients over 50 years of age,
- Accompanying symptoms such those below should provoke urgent investigation because of the risk of malignancy or other serious bowel disorder:
    - iron deficiency anaemia,
    - abdominal pain,
    - weight loss,
    - overt or occult blood in the stool

Management

- Treat any underlying cause, (see below). The majority should be quickly ruled out. If symptoms are ongoing or refractory to laxative treatment, the following blood tests for full blood count, thyroid function tests, HbA1c, and serum electrolytes and calcium, can help rule out an underlying cause.

- In those patients with secondary constipation caused by a drug, the need for that drug (and dose) should be reviewed.

- Admission to hospital with abdominal pain due to constipation is a frequent event. Modern lifestyles with less activity and less fibre in diets exacerbate the risk of developing problems in susceptible individuals. Primary care staff have a vital role in preventing discomfort and avoidable admissions.

- This pathway uses the NICE Clinical Knowledge Summary guidance.

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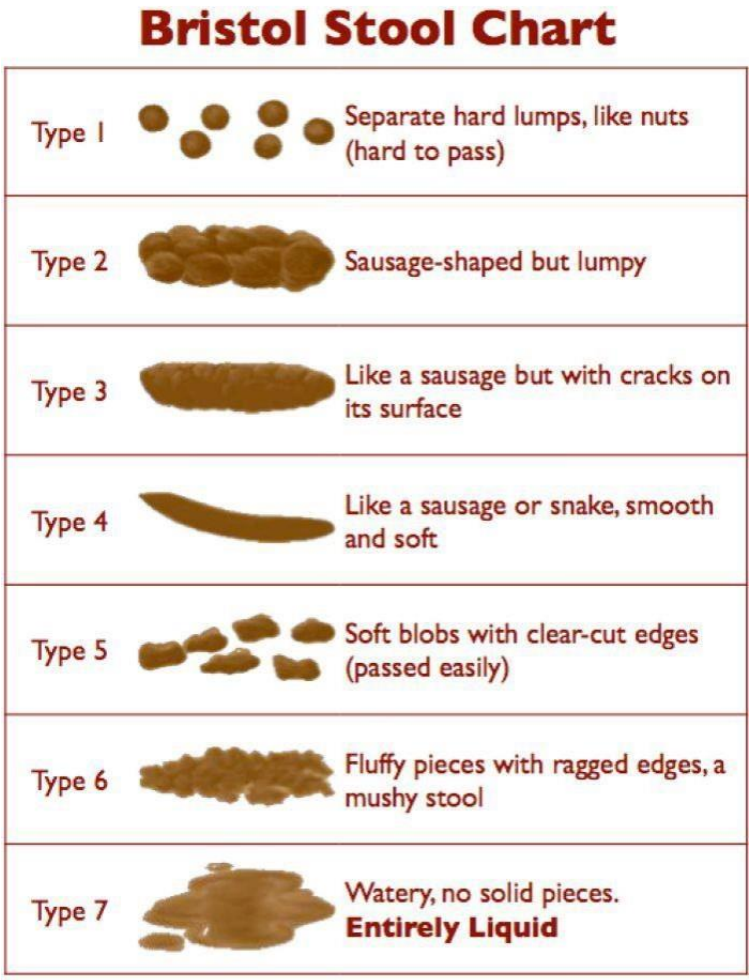
- Stool description is helped by the Bristol Stool Chart



- **Healthy, balanced diet** and having regular meals:
  - The person's diet should contain whole grains, fruits (and their juices) high in sorbitol, and vegetables.
  - Wholegrains found in porridge, cereals and bread; also fibre in beans and pulses, seeds and nuts. The association of UK Dieticians has a useful FoodFactSheet on Fibre
  - Fruits that have a high sorbitol content include apples, apricots, grapes (and raisins), peaches, pears, plums (and prunes), raspberries, and strawberries.
  - Fibre intake should be increased gradually (to minimize flatulence and bloating) — adults should aim to consume 30 g of fibre per day.

- Advise the person that the beneficial effects of increasing dietary fibre *may take weeks* so perseverance is needed. The BNF says at 1-4 weeks[i]

- **Drinking** an adequate fluid intake, especially if there is a risk of dehydration. The Association of UK Dietitians has a useful Food Fact Sheet on Fluid.

- **Increasing activity and exercise** levels, if needed.

- Helpful **toileting routines**:
  - Advise on a regular, unhurried toilet routine, giving time to ensure that defecation is complete.
  - Advise on responding immediately to the sensation of needing to defecate.
  - Ensure that people with limited mobility have appropriate help to access the toilet and adequate privacy.
  - Ensure the person has access to supported seating if they are unsteady on the toilet.

Prescribing Advice:

If the above measures are ineffective, or symptoms do not respond adequately, offer treatment with oral laxatives using a stepped approach. Most laxatives can be bought over the counter from a pharmacy, patients are encouraged to purchase medicines over the counter for self-limiting conditions.

NICE pathway
– see details about different types of laxatives under Know your Laxatives below

1. Offer a **bulk-forming laxative first-line**, such as **ispaghula** (unless a person has opioid induced constipation). Note: it is important for the person to drink an adequate fluid intake.
2. **Add or switch to an osmotic laxative** if stools remain hard or difficult to pass, such as a **macrogol**.
   - If a **macrogol** is ineffective or not tolerated, offer treatment with lactulose second - line.
3. If **stools are soft, but difficult to pass**, or there is a sensation of inadequate emptying, add a **stimulant laxative**.

- If the person has **opioid-induced constipation**:
  - Do not prescribe bulk-forming laxatives.
  - Offer an osmotic laxative and a stimulant laxative (or **docusate** is an alternative which also has stool-softening properties).

- Advise the person to gradually reduce and stop laxatives once the person is producing soft, formed stool without straining at least three times per week.

- Arrange to review the person regularly, depending on clinical judgement. Without positive benefit or adequate encouragement to maintain behaviour change patients may not improve, or may relapse **and in doing so risk admission with abdominal pain**. Patients should be encouraged to self-titrate their treatment

- If the person has ongoing symptoms despite these measures, offer drug treatment with oral laxatives using a stepped approach. Adjust the dose, choice, and combination of laxatives used, depending on the person's symptoms, the desired speed of symptom relief, the response to treatment, and their personal preference.

- Secondary care can consider trying other drugs such as **prucalopride** (in women only), if at least two laxatives from different classes have been tried at the highest tolerated

recommended doses for at least 6 months, and failed to relieve symptoms, where invasive treatment (such as suppositories, enemas, rectal irrigation and/or manual dis-impaction) is being considered. The formulary states Gastroenterology Consultants can initiate and GPs may continue the prescribing when a review after a month's therapy demonstrates benefit.

- **Linaclotide** is not included in the NICE pathway but may also be considered as an option for patients with moderate to severe irritable bowel syndrome associated with constipation.

When to refer and Information to include in referral letter

When above measures and treatments have failed and secondary care investigation (colonoscopy, CT colonoscopy, transit studies) or management (trial of prucalopride or rectal irrigation) may be needed.

- Bowel habit history
- Non-medical methods tried
- Drugs used and doses and any adverse side effects
- Impact on patient's life / any admissions
- Full blood count, thyroid function tests, HbA1c, and serum electrolytes and calcium
- Medication list

Know your Laxatives

Laxatives can be slowly withdrawn when regular bowel movements occur without difficulty, according to the frequency and consistency of the stools. If a combination of laxatives has been used, reduce and stop one laxative at a time; if possible, the stimulant laxative should be reduced first. However, it may be necessary to also adjust the dose of the osmotic laxative to compensate.

Bulk-forming laxatives

Bulk-forming laxatives, for example **ispaghula husk**, and **sterculia** (**Normacol®**), are of particular value in adults with small hard stools if fibre cannot be increased in the diet.

Onset of action is up to 72 hours. Symptoms of flatulence, bloating, and cramping may be exacerbated.

Adequate fluid intake must be maintained to avoid intestinal obstruction. **Methylcellulose**, **ispaghula husk** and **sterculia** may be used in patients who cannot tolerate bran. **Methylcellulose** also acts as a faecal softener.

Stimulant laxatives

Stimulant laxatives include **senna** and **bisacodyl**, **sodium picosulfate**, and members of the anthraquinone group (**senna**, **co-danthramer** and **co-danthrusate**). Stimulant laxatives increase intestinal motility and often cause abdominal cramp; manufacturers advise they should be avoided in intestinal obstruction.

The use of **co-danthramer** and **co-danthrusate** is limited to constipation in terminally ill patients because of potential carcinogenicity (based on animal studies) and evidence of genotoxicity.

Docusate sodium is believed to act as both a stimulant laxative and as a faecal softener (below). **Glycerol** suppositories act as a lubricant and as a rectal stimulant by virtue of the mildly irritant action of glycerol.

Faecal softeners

Faecal softeners are claimed to act by decreasing surface tension and increasing penetration of intestinal fluid into the faecal mass. **Docusate sodium** and **glycerol** suppositories have softening properties. Enemas containing **arachis oil** (ground-nut oil, peanut oil) lubricate and soften impacted faeces and promote a bowel movement. **Liquid paraffin** has also been used as a lubricant for the passage of stools but manufacturer advises that it should be used with caution because of its adverse effects, which include anal seepage and the risks of granulomatous disease of the gastro-intestinal tract or of lipoid pneumonia on aspiration.

Osmotic laxatives

Osmotic laxatives increase the amount of water in the large bowel, either by drawing fluid from the body into the bowel or by retaining the fluid they were administered with. **Lactulose** is a semi-synthetic disaccharide which is not absorbed from the gastro-intestinal tract. It produces an osmotic diarrhoea of low faecal pH, and discourages the proliferation of ammonia-producing organisms. It is therefore useful in the treatment of hepatic encephalopathy.

Macrogols (such as **macrogol 3350 with potassium chloride, sodium bicarbonate and sodium chloride** e.g. **Cosmocol®** & **Laxido®**) are inert polymers of ethylene glycol which sequester fluid in the bowel; giving fluid with macrogols may reduce the dehydrating effect sometimes seen with osmotic laxatives.

Other drugs used in constipation

Linaclotide is a guanylate cyclase-C receptor agonist that is licensed for the treatment of moderate to severe irritable bowel syndrome associated with constipation. It increases intestinal fluid secretion and transit, and decreases visceral pain. It is green on the formulary and is approved for the symptomatic treatment of moderate to severe irritable bowel syndrome with constipation in those patients not responding adequately to treatment with antispasmodics, laxatives and antidepressants.

Prucalopride is a selective serotonin 5HT4-receptor agonist with prokinetic properties. It is licensed for the treatment of chronic constipation in adults, when other laxatives have failed to provide an adequate response. It is amber on the formulary, for use in accordance with NICE TA 211 for the treatment of chronic, resistant constipation in women. It should be consultant initiated and GPs may continue the prescribing when a review after a month's therapy demonstrates benefit. It is licensed for use in men but most data submitted to NICE was about women using it.

Lubiprostone was a new drug for constipation but it is no longer commissioned and has been removed from the formulary because the product has been discontinued and the NICE TA has been withdrawn.

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Patient information leaflets/ PDAs

- Constipation
- Bowel incontinence
- www.eric.org.uk (child focused)
- The Association of UK Dietitians has useful Food Fact Sheets on Fibre and Fruit and vegetables - how to get five-a-day.
- Public Health England's booklet The Eatwell Guide

References

i https://doi.org/10.18578/BNF.979440363

CCG spend on laxatives (see tables below)

Spending over £500,000 annually on laxatives (and the additional cost of consulting with GPs) is a lot of money when for most patients natural remedies should suffice. NICE recommend first line use of **bulk-forming laxatives such** ispaghula (unless opioid induced constipation) and a change by 50% of patients could generate a saving of around 10% of total spend.

Clinicians should ensure that all these products are prescribed generically. Macrogol prescribed generically will cost the NHS £3.60 (Oct 2019) however if a brand such as Movicol is prescribed, it will cost £8.11 Even so-called Branded generic (eg Laxido or Cosmocol) cost more, as do 'ghost branded' generics which include a specific manufacturer (e.g. macrogol compound oral powder sachets sugar free Manufacturer X Ltd).

BNF Chemical Substance	Items	Actual Cost in 18/19
Macrogol 3350	49877	£303,002.42
Lactulose	12447	£32,350.11
Senna	11403	£21,294.55
Ispaghula Husk	8174	£35,908.42
Docusate Sodium	5626	£30,364.53
Bisacodyl	2700	£27,298.09
Sodium Picosulfate	640	£4,914.57
Linaclotide	580	£22,001.56
Prucalopride	479	£29,147.69
Sterculia (Normacol)	216	£1,678.85
Lubiprostone	53	£2,591.76
Co-Danthramer (Dantron/Poloxamer 188)	4	£1,252.85
Macrogol 4000	4	£29.84
Co-Danthrusate (Dantron/Docusate Sod)	1	£143.32
	92204	**£511,978.58**

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Laxative Prices Oct 2019

Ispaghula Husk	30	£2.83	1 sachet BD	£5.28
Methylcellulose (Celevac)	112	£3.22	3-6 tablets BD	£4.83 - £9.66
Sterculia (Normacol)	60 sach	£7.12	1-2 Sachet OD-BD	£3.32 - £13.29
Sterculia (Normacol)	500g	£8.45	5ml heap OD-BD	est. £2.36 - £4.73
Lactulose	500ml	£2.84	15ml BD	£4.77
Macrogol	28	£3.96	2 sachet OD	£7.92
Senna 7.5mg tab	60	£2.05	7.5mg -15mg OD	£0.96 - £1.91
Bisacodyl 5mg tab	60	£4.46	5mg-10mg OD	£2.08 - £4.16
Sodium Picosulfate 5mg/5ml liquid	300ml	£8.80	5mg-10mg OD	£4.11 - £8.21
Docusate Sodium 100mg cap	30	£2.09	upto 500mg Daily	£1.95 - £9.75
Docusate 50mg/5ml oral solution	300ml	£9.19	upto 500mg Daily	£8.57 - £42.88
Linaclotide caps	28	£37.56	290mcg OD	£37.56
Prucalopride 1mg tab	28	£38.69	1mg - 2mg OD	£38.69
Prucalopride 2mg tab	28	£59.52	1mg - 2mg OD	£59.52
Co-Danthrusate 50mg/60mg/5ml	200ml	£202.50	5ml-15ml ON	£141.57 - £425.25
Co-Danthramer25mg/200mg/5ml	300ml	£180.00	5ml -10ml ON	£84.00 - £168.00
Co-Danthramer 75mg/1000mg/5ml	300ml	£367.50	5ml ON	£171.50
Bulk Forming (Blue) NICE **recommend first line use**, unless opioid induced constipation				
Faecal Softener/Osmotic (Orange) NICE recommend second line or for opioid induced constipation				
Stimulants (Green) NICE recommend if stools are soft, but difficult to pass				
Faecal Softener & Stimulant (Yellow) – consider in opioid induced constipation				
Other (White)				

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