TREATMENT OF CHRONIC CONSTIPATION IN ADULTS (≥18 YEARS OF AGE) IN PRIMARY CARE

Symptoms of chronic constipation (modified *Rome III criteria)*
2 or more of the following for at least 12 weeks (not necessarily consecutive) with symptoms onset at least 6 months prior to diagnosis

- Straining during >25% of bowel movements
- Lumpy or hard stool for >25% of defecation
- Sensation of incomplete evacuation for ≥ 25% of defecation
- Sensation of anorectal obstruction/blockage for ≥ 25%
- < 3 spontaneous bowel movements per week

Additional criteria

- Loose stool rarely present without the use of laxatives
- Insufficient criteria to indicate IBS

Following symptoms suggestive of **Irritable Bowel Syndrome (IBS):**

- Abdominal pain associated with defecation
- Alternating stool form, frequency

→ IBS pathway

ALARM symptoms

- Rectal bleeding
- Nocturnal symptoms
- Unintentional weight loss
- Family history of bowel (or ovarian) cancer

→ Secondary care

☑ **Rectal and Abdominal Examination**
☑ **Gynaecological History / Examination**
☑ **Medical History** (Table 1)
☑ **Medicines** (Table 2)
☑ **Bloods:** FBC, ESR, TFTs, Calcium

Refer to page 2

Anaemia with GI symptoms
Blood tests or examination abnormal or high clinical suspicion of pathology

→ Secondary care

If "NO" to any on Table 1 and 2 (see page 2) and normal blood test results

If "YES" to any on Table 1 and 2 and/or abnormal blood test results

Primary (idiopathic) constipation

Encourage the person or carer to manage their symptoms with self-management advice (Constipation - NICE CKS) e.g. diet (fibres and fruits and vegetables), exercise, fluid intake and toilet routines

Secondary constipation

- Treat specific cause / medication
- Add appropriate laxatives
- Early referral to pelvic floor service if appropriate

Choice of appropriate "first line" laxatives depends on SYMPTOMS
Please note some of these preparations are available over the counter
(Refer to Table 3 for examples in each laxative class)

- Low faecal mass → Bulk forming laxatives (e.g. ispaghula husk)
- Slow transit → Stimulant laxatives (e.g. bisacodyl or senna)
- Pellet stool → Faecal softeners (e.g. sodium docusate)
- Hard stools → Osmotic laxatives (e.g. macrogol or lactulose)
- Obstructive or incomplete evacuation → Suppositories
- Combination therapies possible / advisable especially for secondary constipation

Good response to treatment with laxatives is defined as increase stool frequency and/or eases of stool passage and/or sensation of complete emptying, consider the use of the Bristol Stool Chart to provide an objective record of the person's stool form.

If responding well and presenting symptoms show improvement, continue first line and review as necessary

- ***Escalating treatment:*** If bowels not opened for >72 hours despite laxative treatment, escalate by increasing dose of one of more laxatives. If failing 2 laxatives for ≥3 months, consider pharmacological agent in line with NICE. If worsening symptoms at 6-8weeks, consider other pathology/ referral/ ? malignancy.
- ***De-escalating treatment:*** If bowels open ≥3 times within 24 hours, decrease dose or stop one of the laxatives
- ***Stop/alter treatment:*** If loose stools/diarrhoea develops

Stimulant laxative such as Senna should be used with caution at any stage of the pathway and limit the use to 2 weeks and then reassess.

Suitable for patients with slow transit/ obstructive defecation
NICE TA211 4-week trial **Prucalopride** 2mg daily; (over 65 years of age) 1mg daily
If good response: continue once daily up to maximum of 3 months. **Stop** if no response.
Licensed for both MEN and WOMEN (Jun 2015)

If not responding →

If combination therapy with 2 laxatives from different classes at highest tolerated dose for at least 6 months, does not resolve symptoms
NICE TA318 2-week trial **Lubiprostone** 24micrograms twice daily
If good response: continue up to maximum of 4 weeks. **Stop** if no response.

→ **Refer to specialist for investigations if failing therapy**

South East London Area Prescribing Committee. A partnership between NHS organisations in South East London: Bexley/ Bromley/ Greenwich/ Lambeth/ Lewisham & Southwark Clinical Commissioning Groups (CCGs) & GSTFT/KCH/SLAM/Oxleas NHS Foundation Trusts & Lewisham & Greenwich NHS Trust

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Choice of appropriate 'first line' laxatives depends on SYMPTOMS Features of pelvic floor disturbances: straining, digitation, incomplete evacuation, normal urge/frequency Features of slow transit: reduced urge to defecate, bloating		
Symptom	**Constipation subtype**	**Treatment notes**
Bloating / discomfort	All types – significant overlap	Soluble fibre
Infrequent urge	Slow transit / functional	Insoluble fibre/bran can worsen constipation Laxatives rarely produce diarrhoea
Hard stools	Slow transit / functional	
Straining at stool	Pelvic floor disorders	Suppositories work, but poorly tolerated Biofeedback if available **Early referral to specialist service**
Incomplete evacuation	Pelvic floor disorders	
Rectal digitation	Pelvic floor disorders	
Vaginal digitation	Rectocele / Enterocele	Suppositories may help; Pelvic floor service

Table 1: Medical conditions predisposing to constipation *(refer to NICE for comprehensive list)*
Depression
Diabetes mellitus
Gastrointestinal obstruction e.g. gastrointestinal carcinoma, ileus, ovarian or uterine tumours
Hypercalcaemia
Hypokalaemia
Hypothyroidism
Multiple sclerosis
Parkinson's disease
Gynaecological prolapse e.g. post childbirth
Stroke
Spinal cord injuries or other neurological disorders, including motor neurone disease, cerebral palsy

Table 2: Common drugs that can cause constipation *(This list is not exhaustive)*
1. Iron and calcium supplements e.g. ferrous sulfate, Adcal-D3®
2. Antacids containing aluminum or calcium e.g. Rennie®
3. Anticonvulsants e.g. carbamazepine, gabapentin, pregabalin
4. Analgesics e.g. opiates, NSAIDs
5. Tricyclic antidepressants e.g. amitriptyline
6. Sedating antihistamines e.g. hydroxyzine
7. Antimuscarinics e.g. procyclidine and oxybutynin
8. Antipsychotics e.g. amisulpride, quetiapine; it is vital to recognise and treat *Clozapine induced constipation* actively *MHRA Oct 17 Drug Safety Update: Clozapine: reminder of potentially fatal risk of intestinal obstruction, faecal impaction, and paralytic ileus*)
9. 5-HT antagonists e.g. ondansetron
10. Diuretics e.g. furosemide
11. Verapamil

Table 3: Indications and recommendations for different classes of laxatives
(Refer to Summary of Product Characteristics for each individual laxative for additional information)

Class	Drug Name & Dose	Onset of action	Contra-indications and additional information
Bulk-forming laxatives Increase faecal mass thus stimulating peristalsis	**Unprocessed bran**	2-3 days	• Faecal impaction • Intestinal obstruction • Swallowing difficulty • Colonic atony • Palliative patients (due to long onset of action)
	Ispaghula husk 3.5g/sachet granules 1 sachet morning and evening after meals	2-3 days	
	Sterculia Normacol® granules 1–2 spoonful's washed down without chewing with plenty of liquid OD-BD after meals	2-3 days	

Table 3: Indications and recommendations for different classes of laxatives continued
(Refer to Summary of Product Characteristics for each individual laxative for additional information)

Class	Drug Name & Dose	Onset of action	Contra-indications and additional information
Bulk-forming laxatives Increase faecal mass thus stimulating peristalsis	**Methylcellulose** 500mg tablets 3-6 twice daily with at least 300ml of water	2-3 days	• Not to be taken immediately before bed
Stimulating laxatives Increase intestinal motility For short term, when required only	**Bisacodyl (oral)** 5–10mg at night	6-12 hr	• Intestinal obstruction • Recent abdominal surgery • Acute inflammatory bowel disease
	Bisacodyl (suppository) 10mg in the morning	15min - 3 hr	
	Senna 7.5-15mg at night	8-12 hr	
	Sodium picosulphate 5–10mg at night	6-12 hr	
	Glycerol (suppository) 1 x 4g suppository moistened with water before use, when required.	15-30 min	
	Last line for palliative care only		• Reserved for palliative care patients only where senna and docusate sodium have failed to work
	Dantron in co-danthramer (Available in liquid only) (with poloxamer "188") 5-10ml at bedtime	6-12 hr	
	Dantron in co-danthrusate (Available in liquid only) (with docusate sodium) 5-15ml at bedtime	6-12 hr	
Faecal softeners 'wetting' agents/lubricants that allow water to penetrate hard faeces	**Docusate sodium (oral)** up to 500mg daily in divided doses	12-72 hr	• Sodium docusate has both stimulant and softening actions
	Docusate sodium (enema) 120mg when required	5-20 min	
	Arachis oil (enema) 133ml when required	30 min	• Patients with peanut allergy
Osmotic laxatives Increase the amount of water in the large bowel	**Lactulose** 3.1-3.7g/5ml oral solution 15ml BD regularly	2-3 days	• Intestinal obstruction, perforation or inflammation • Palliative patients (due to long onset of action)
	Macrogols Cosmocol® sachet 1–3 sachets daily in divided doses usually for up to 2 weeks; maintenance, 1–2 sachets daily	2-3 days	
	Magnesium hydroxide BP 30–45 mL with water at bedtime when required	3-6 hr	• Commonly abused but are satisfactory for occasional use; adequate fluid intake should be maintained
	Magnesium sulphate (Epsom salt) 5–10 g in a glass of water preferably before breakfast	2-4 hr	• Where rapid bowel evacuation is required
	Phosphate (enema) 1 enema as needed	2-5 min	• Used with caution in renal and cardiac failure

Table 3: Indications and recommendations for different classes of laxatives continued
(Refer to Summary of Product Characteristics for each individual laxative for additional information)

Class	Drug Name & Dose	Onset of action	Contra-indications and additional information
Osmotic laxatives *(continued)*	**Sodium citrate (micro-enema)** *Refer to BNF for dosage of different brands available*	5-15 min	• Should be avoided in individuals susceptible to sodium and water retention
Chloride-channel activator *NICE TA318* Act in the gut to increase intestinal fluid secretion, which increases motility	*ONLY after trial treatment with at least 2 laxatives from different classes, at the highest tolerated recommended doses for at least 6 months* **Lubiprostone** 24 micrograms twice daily for **2 to 4 weeks.** Efficacy beyond 4 weeks has not been demonstrated in placebo controlled studies. Treatment should be stopped if there is no response after at least 2 weeks.	1.5hrs	• Gastro-intestinal obstruction
Selective serotonin 5HT4-receptor agonist NICE TA211 *(for women)* Stimulate colonic motility with prokinetic properties ***Licence has been changed to include both MEN and WOMEN since Jun 2015***	*ONLY after trial treatment with at least 2 laxatives from different classes, at the highest tolerated recommended doses for at least 6 months* **Prucalopride** 2mg daily; (over 65 years of age) 1mg daily. Review and discontinue treatment if no response after 4 weeks.	2-3 hr	• Renal impairment requiring dialysis • Intestinal perforation or obstruction • Severe inflammatory conditions of the intestinal tract e.g. Crohn's disease, ulcerative colitis, and toxic megacolon • Pregnant and breast-feeding women
Guanylate cyclase-C receptor agonist **SEL APC Recommendation** Increase intestinal fluid secretion and transit, and decreases visceral pain	***2[d] line option*** *for IBS associated with constipation if other therapies recommended by NICE for IBS have been ineffective or not tolerated* **Linaclotide** 290mg once daily. If no improvement of symptoms after **4 weeks**, the benefits and risks of continuing treatment should be reconsidered.	Immediately but symptoms improves were seen in 1 week on clinical studies	• Gastro-intestinal obstruction • Inflammatory bowel disease
Peripheral antagonist of mu-opioid receptor *NICE TA345* Reverse the peripheral constipatory effects of opioids	*ONLY for treatment of opioid induced constipation in adults whose constipation has not adequately responded to laxatives* ▼ **Naloxegol** 25mg once daily (or starting dose of 12.5 mg for people with renal insufficiency and taking moderate CYP3A4 inhibitors [e.g. diltiazem, verapamil].The dose can be increased to 25 mg if 12.5 mg is well tolerated by the patient)	< 2 hr	• Gastro-intestinal obstruction • Patients with cancer with certain conditions that increase the risk of GI perforation e.g. advanced ovarian cancer (see SPC for specific advice) • Concomitant use with strong CYP3A4 inhibitors (e.g. clarithromycin, ketoconazole)

- An inadequate response is defined as opioid-induced constipation symptoms of at least moderate severity in at least 1 of the 4 stool symptom domains (that is, incomplete bowel movement, hard stools, straining or false alarms) while taking at least 1 laxative class for at least 4 days during the prior 2 weeks.
- When naloxegol therapy is initiated, it is recommended that all currently used maintenance laxative therapies are stopped, until the clinical effect of naloxegol is determined.

Table 4: Treatments that are NOT recommended for use in Primary Care

Gut microbiota or **probiotics** limited evidence for their routine use.
Naloxone and naltrexone block opiate receptors that stimulate mucosal absorption and slow intestinal transit. *Targinact*® (oxycodone/naloxone) is licensed for reducing opioid induced constipation. It is not however recommended for prescribing in South East London for this indication (standard laxatives should be used with opioids, or naloxegol as per restrictions above). *Methylnaltrexone subcutaneous injection* is occasionally used by palliative care as a last line agent for those with opioid induced constipation. It is for specialist palliative care prescribing only.
Prokinetics e.g. domperidone, erythromycin and metoclopramide, increase intestinal motor activity, the effect appears to be modest, they are poorly tolerated and may have to be given intravenously.
Cholinergic agonists e.g. bethanechol and neostigmine, increase motility of smooth muscle. There are limited data on the use of these agents in treating constipation.
Trans-anal irrigation system/Rectal Irrigation Systems (Peristeen®; Qufora®; Aquaflush®) is recommended in patients who have exhausted all other conservative treatment options in the treatment of neurogenic bowel dysfunction, e.g. spinal cord injury, spina bifida, multiple sclerosis; chronic constipation including both evacuation difficulties and slow transit constipation; chronic faecal incontinence. Treatment should be initiated and stabilised by specialist service providers for a period of 3 months. Treatment should be considered for transfer to primary care after the initial 3 month period only where there has been a demonstrable improvement in validated measures of bowel function.
NPSA Rapid Response Report 2009/RRR012 Use of a **bowel cleansing solution** should be authorised at the same time as the surgery or investigative procedure.

Constipation in Pregnancy

Constipation affects around 38% of pregnant women, largely due to increased progesterone levels reducing intestinal motility and increasing gut transit time. Other factors include nausea and vomiting in early pregnancy, iron supplements, pressure on the bowel from the growing baby and reduced physical activity.

Dietary modifications and exercise may be all that is needed. If laxatives are necessary, agents that are poorly absorbed from gastrointestinal tract are preferred (e.g. bulk forming (first-line), faecal softening and osmotic agents). Avoid senna especially in third trimester or in women with a history of unstable pregnancy because it can induce uterine contractions.

Constipation in Cancer

For opioid-induced constipation, co-prescribing laxatives from the outset usually requires both a stool softener and a stimulant laxative. Patients should be encouraged to consume fibre-rich foods (e.g. fruit juice and stewed fruit) and maintain a good fluid intake.

References:

1. National Institute for Health and Care Excellence. https://www.nice.org.uk/guidance/conditions-and-diseases/digestive-tract-conditions/constipation [Last accessed date: 3/11/2017]
2. British National Formulary. https://www.evidence.nhs.uk/formulary/bnf/current/ [Last accessed date: 3/11/2017]
3. Clinical Knowledge Summaries. http://cks.nice.org.uk/constipation [Last accessed date: 3/11/2017]
4. Electronic Medicines Compendium. https://www.medicines.org.uk/emc/ [Last accessed date: 3/11/2017]