The diagnosis and management of idiopathic constipation

Assessment and diagnosis

Table A Initial assessment – establish if the child has constipation

Two or more of the following, with symptoms lasting for more than 1 month, indicates constipation.

Component	Child younger than 1 year	Child/young person older than 1 year
Stool patterns	• Fewer than three complete stools per week (see Bristol Stool Form Scale 3 and 4) • Hard large stool (See Bristol Stool Form Scale) • 'Rabbit droppings' (See Bristol Stool Form Scale)	• Fewer than three complete stools per week (see Bristol Stool Form Scale 3 and 4) • Overflow soiling (that is, very loose, very smelly stool passed without sensation) • 'Rabbit droppings' (See Bristol Stool Form Scale) • Large, infrequent stools that can block the toilet
Symptoms associated with defaecation	• Distress on stooling • Bleeding associated with hard stool • Straining	• Poor appetite that improves with passage of large stool • Waxing and waning of abdominal pain with passage of stool • Evidence of retentive posturing: typical straight legged, tiptoed, back arching posture • Straining
History	• Previous episode(s) of constipation • Previous or current anal fissure	• Previous episode(s) of constipation • Previous or current anal fissure • Painful bowel movements and bleeding associated with hard stool

Management

Disimpaction

- Assess all children with chronic idiopathic constipation for faecal impaction, including children who were referred because of 'red flags' but in whom there were no significant findings following further investigations.
- Use the following oral medication regimen for disimpaction if indicated:
  - Use polyethylene glycol '3350' + electrolytes (Movicol Paediatric Plain) using an escalating dose regimen (see table 4) as the first-line treatment. This may be mixed with a cold drink.
  - Review within a week.
  - Add a stimulant laxative (see table E) if polyethylene glycol '3350' + electrolytes (Movicol Paediatric Plain) does not lead to disimpaction after 2 weeks.
  - Substitute a stimulant laxative singly or in combination with an osmotic laxative such as lactulose (see table 4), if polyethylene glycol '3350' + electrolytes (Movicol Paediatric Plain) is not tolerated.
- Do not:
  - use rectal medications for disimpaction unless all oral medications have failed
  - administer sodium citrate enemas unless all oral medications have failed
  - administer phosphate enemas unless under specialist supervision in hospital, and only if all oral medications and sodium citrate enemas have failed
  - perform manual evacuation of the bowel under anaesthesia unless optimum treatment with oral and rectal medications has failed.

Additional management

Specialist treatment

- Do not routinely refer a child to psychologist/CAHMS unless the child has identified psychological needs
- Refer to a healthcare professional with expertise in constipation if no response to treatment within 3 months. Specialist may:
  - Start cows' milk exclusion diet
  - Consider using the following to assist with ongoing management:
    - ◊ plain abdominal radiograph
    - ◊ abdominal ultrasound
    - ◊ transit studies.

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Table B History taking – establish idiopathic constipation

Component	Potential findings and diagnostic clues in child younger than 1 year	Potential findings and diagnostic clues in a child/young person older than 1 year
Timing of onset of constipation and potential precipitating factors	Starts after a few weeks of life Obvious precipitating factors coinciding with the start of symptoms: fissure, change of diet, infections	Starts after a few weeks of life Obvious precipitating factors coinciding with the start of symptoms: fissure, change of diet, timing of potty/toilet training or acute event such as infections, moving house, starting nursery/school, fears and phobias, major change in family
	Reported from birth or first few weeks of life	Reported from birth or first few weeks of life
Passage of meconium	Normal, that is within 24 hours after birth (in term baby)	Normal, that is within 24 hours after birth (in term baby)
	Failure to pass/delay – more than 24 hours after birth (in term baby)	Failure to pass/delay – more than 24 hours after birth (in term baby)
Growth and general wellbeing	Generally well, weight and height within normal limits	Generally well, weight and height within normal limits, fit and active
	Faltering growth	Faltering growth
Symptoms in legs / locomotor development	No neurological problems in legs, normal locomotor development	No neurological problems in legs (such as falling over), normal locomotor development
	Previously unknown or undiagnosed weakness in legs, locomotor delay	Previously unknown or undiagnosed weakness in legs, locomotor delay
Abdomen	Abdominal distension and vomiting	Abdominal distenson and vomiting
Diet and fluid intake	Changes in formula, weaning, insufficient fluid intake	History of poor diet and/or insufficient fluid intake
Personal/familial/social factors	Disclosure or evidence that raises concerns over possibility of child maltreatment (See 'When to suspect maltreatment in children' NICE guideline CG89 for examples and subsequent management)	Disclosure or evidence that raises concerns over possibility of child maltreatment (See 'When to suspect maltreatment in children' NICE guideline CG89 for examples and subsequent management)

Red cells: 'red flag' for underlying disorder, exclude idiopathic constipation and refer to specialist in child health. Do not assess for faecal impaction at this stage.
Amber cells: 'amber flag', possible idiopathic constipation. Faltering growth: test for coeliac disease and hypothyroidism before assessing for faecal impaction.
Green cells: indicative of idiopathic constipation. Assess for faecal impaction.

Maintenance programme

To establish regular bowel habit

- start maintenance regime therapy as soon as child's bowel is disimpacted
- reassess frequently to ensure bowel does not become reimpacted

Maintenance regimen (see table E)

Adjust dosages and provide tailored follow up according to frequency, amount and consistency of stools
(See Bristol Stool Form Scale – appendix G)

- first line treatment polyethylene glycol '3350' + electrolytes (Movicol Paediatric Plain) (titrate from half disimpaction dose)
- add a stimulant laxative if polyethylene glycol '3350' + electrolytes (Movicol Paediatric Plain) does not work
- substitute a stimulant laxative if polyethylene glycol '3350' + electrolytes (Movicol Paediatric Plain) is not tolerated. Add another laxative eg lactulose or docusate if stools are hard.

Once regular bowel habit is established

- Continue medication at maintenance dose for several weeks after regular bowel habit is established.
- Gradually reduce dose over a period of months in response to stool consistency and frequency.
- Some children may require laxative therapy for several years.

Antegrade colonic enema (ACE) procedure

- Refer children who remain symptomatic on optimal specialist management to specialist surgical centre to assess suitability for an ACE procedure
- Ensure that all children who are referred for an ACE procedure have access to support, information and follow-up from paediatric healthcare professionals with experience in managing children who have had an ACE procedure

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Table C Components of physical examination	
Components	**Potential findings and diagnostic clues**
Inspection of perianal area: appearance, position, patency, etc	Normal appearance of anus and surrounding area
	Abnormal appearance/position/patency of anus: fistulae, bruising, multiple fissures, tight or patulous anus, anteriorly placed anus, absent anal wink
Abdominal examination	Soft abdomen. Flat or distension that can be explained because of age or overweight child
	Gross abdominal distension
Spine/lumbosacral region/gluteal examination	Normal appearance of the skin and anatomical structures of lumbosacral/gluteal regions
	Abnormal: asymmetry or flattening of the gluteal muscles, evidence of sacral agenesis, discoloured skin, naevi or sinus, hairy patch, lipoma, central pit (dimple that you can't see the bottom of), scoliosis
Lower limb neuromuscular examination including tone and strength	Normal gait. Normal tone and strength in lower limbs
	Abnormal neuro-muscular signs, unexplained by any existing condition, such as cerebral palsy
Lower limb neuromuscular examination: Reflexes (perform only if red flags in history/previous examination suggest new onset neurological impairment)	Reflexes present and of normal amplitude
	Abnormal reflexes

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Digital rectal examination

- Do not perform digital rectal examination in **children older than 1 year** unless there is a 'red flag' (see tables B and C) in the history and/or physical examination that may indicate an underlying disorder
- Digital rectal examination should be undertaken only by healthcare professionals competent to interpret features of anatomical abnormalities or Hirschsprung's disease
- For digital rectal examination ensure:
  - informed consent is given by the child, or the parent or legal guardian if child not able to give it, and is documented
  - a chaperone is present
  - individual preferences about degree of body exposure and sex of examiner are taken into account
  - all findings are documented

Maintenance regime (cont)

In combination with maintenance regime (laxatives):

- Offer a point of contact with specialist health care professionals for ongoing support
- Advise appropriate dietary modifications, but not as first line treatment alone:
  - Adequate fibre: recommend including foods with a high fibre content such as fruit, vegetables, baked beans and wholegrain breakfast cereals
  - Do not recommend unprocessed bran, which can cause bloating and flatulence and reduce the absorption of micronutrients
  - Adequate fluid intake (see table D)
  - Do not start cows' milk exclusion diet (see specialist treatment)
- Advise 60 minutes of physical activity per day, tailored to the child's stage of development and individual ability
- Advise negotiated and non-punitive behavioural interventions, such as:
  - scheduled toileting and support to establish a regular bowel habit
  - maintenance and discussion of bowel diary
  - information on constipation
  - use of encouragement and rewards systems.

Provide children and parents with:

- written information on diet and fluid intake
- detailed evidenced based information about constipation
- verbal and written or website information in several formats about how bowels work, symptoms that might indicate a serious underlying disorder, how to take medication, what to expect when taking laxatives, how to poo
- follow up support by telephone or face-to-face

Perform a digital rectal examination in all children younger than 1 year with a diagnosis of idiopathic constipation that does not respond to adequate treatment within 4 weeks

Do not perform rectal biopsy unless clinical features of Hirschsprung's disease present

Investigations

Do not use the following to confirm or investigate idiopathic constipation:

- plain abdominal radiograph
- abdominal ultrasound
- transit studies
- gastrointestinal endoscopy

Do not use anorectal manometry to exclude Hirschsprung's disease.
Do not test for coeliac disease unless there is faltering growth, or test is requested by specialist services.
Do not screen for hypothyroidism unless there is faltering growth

Table D Children's daily fluid requirements

0-3 months: 150 ml/kg	10-12 months: 110 ml/kg	7-10 years: 75 ml/kg
4-6 months: 130 ml/kg	1-3 years: 95 ml/kg	11-14 years: 55 ml/kg
7-9 months: 120 ml/kg	4-6 years: 85 ml/kg	15-18 years: 50 ml/kg

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Table E Laxatives - recommended doses

Laxatives	Recommended doses
Macrogols	
Movicol	Movicol Paediatric Plain (Norgine)[a]: Oral powder, macrogol '3350' (polyethylene glycol '3350') 6.563 g, sodium bicarbonate 89.3 mg, sodium chloride 175.4 mg, potassium chloride 25.1 mg/sachet. Given by mouth. **Disimpaction** Child under 1 year: half to 1 sachet daily (non-BNFC recommended dose) Child 1–5 years: treat until impaction resolves or for maximum 7 days. Two sachets on 1st day, then 4 sachets daily for 2 days, then 6 sachets daily for 2 days, then 8 sachets daily for 2 days Child 5–12 years: treat until impaction resolves or for maximum 7 days. Four sachets on 1st day, then increased in steps of 2 sachets daily to maximum of 12 sachets daily **Ongoing maintenance** (chronic constipation, prevention of faecal impaction) Child under 1 year: half to 1 sachet daily (non-BNFC recommended dose) Child 1–6 years: 1 sachet daily; adjust dose to produce regular soft stools (maximum 4 sachets daily) Child 6–12 years: 2 sachets daily; adjust dose to produce regular soft stools (maximum 4 sachets daily)
Osmotic laxatives	
Lactulose	By mouth Child 1 month to 1 year: 2.5 ml twice daily, adjusted according to response Children 1–5 years: 2.5–10 ml twice daily, adjusted according to response (non-BNFC recommended dose) Children 5–18 years: 5–20 ml twice daily, adjusted according to response (non-BNFC recommended dose)
Stimulant laxatives	
Sodium picosulphate[b]	Non-BNFC recommended doses By mouth Child 1 month to 4 years: 2.5–10 mg once a day Child 5–18 years: 2.5–20 mg once a day
Bisacodyl	Non-BNFC recommended doses By mouth Child 4–18 years: 5–20 mg once daily By rectum (suppository) Child 2–18 years: 5–10 mg once daily
Senna[c]	**Sennokot syrup** By mouth Child 1 month to 4 years: 2.5–10 ml once daily Child 5–18 years: 2.5–20 ml once daily **Senna (non-proprietary**) By mouth Child 6–18 years: 1–4 tablets once daily
Docusate sodium[d]	By mouth Child 6 months–2 years: 12.5 mg three times daily (use paediatric oral solution) Child 2–12 years: 12.5–25 mg three times daily (use paediatric oral solution) Child 12–18 years: up to 500 mg daily in divided doses

[a] Movicol Paediatric Plain not licensed for use in faecal impaction in children under 5 years, or for chronic constipation in children under 2 years

[b] Elixir, licensed for use in children (age range not specified by manufacturer). Perles not licensed for use in children under 4 years

[c] Syrup not licensed for use in children under 2 years

[d] Adult oral solution and capsules not licensed for use in children under 12 years

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