Gateshead NHS
Primary Care Trust
Gateshead Health NHS
NHS Foundation Trust

Prescribing Guidance for the Treatment of Constipation in Children

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GATESHEAD MEDICINES MANAGEMENT COMMITTEE

PRESCRIBING GUIDANCE FOR THE TREATMENT OF CONSTIPATION IN CHILDREN

1. Development

This guideline was developed by the Gateshead Medicines Management Committee in consultation with GPs, Nurse Specialists and the Consultant Paediatricians

The sub-group that developed this guideline was as follows;
Mr Gavin Mankin (Medicines Governance Pharmacist) and Dr Anne Dale (Consultant Paediatrician).

The key contact for information is Dr Anne Dale, Consultant Paediatrician, Queen Elizabeth Hospital, Gateshead Health NHS Foundation Trust.

2. Background

Constipation is a common problem in children of all ages, causing significant distress to children and parents. There is no single definition of constipation, but it is generally described as infrequent defecation, often with straining and passage of hard, uncomfortable stool.

Some children with longterm constipation may also have a soiling problem. This is caused by overflow of fluid, or semi-solid stools around the faecally loaded rectum. The child is unable to control the soling.

Soiling may sometimes be confused with encopresis or non-retentive soiling, whereby the child passes normal stools in inappropriate places, including clothing.

Management of constipation in children is often based on clinical experience and consensus, as the published evidence for treatment options is weak. A prescription for a laxative is not always necessary and education/advice on fluid intake and diet should be the first step in the treatment of most constipated patients.
The treatment of constipation in children is often a long-term problem requiring the use of laxatives and other therapies over months or years.
Constipation is often not optimally managed with the laxatives available, and many children who are already established on a laxative programme may also have relapses which involve increasing faecal retention for a period of time which has not responded to simple laxative prescriptions. Laxatives are frequently used at sub-therapeutic doses, in inappropriate dosage regimens or in appropriate combinations.

These guidelines have been developed to help healthcare professionals with the decision-making progress of how to treat constipation in children.

3. Aim

To promote the rational use of laxatives across both primary and secondary care so that the treatment of constipation in children is optimally managed.

4. Implications

Implementation of the attached guidance will improve the safe and effective use of laxatives in children over 1 year old in Gateshead, thus improving the management of constipation in this patient population. There will be an improvement in the management of these patients resulting in a decrease in the inappropriate use of expensive 2nd and 3rd line agents.

These guidelines supersede previous local guidelines for the management of constipation in children.

5. Implementation & Audit

Copies of the guidelines will be circulated to all practices and community pharmacies in Gateshead. The guidelines will also be widely circulated through out Gateshead Health NHS Foundation Trust to all paediatric wards and clinics.

This policy will be reviewed on a biannual basis or in the intervening period if new evidence is published that means an update or revision is required before two years have passed.

6. References

1. British National Formulary for Children 2011-2012 Edition. The Pharmaceutical Press / British Medical Association 2011.

2. Chronic Consipation in Children. Rubin G & Dale A. BMJ Vol 333 pg 1050-1555

3. Lothian Joint Formulary for Children. Date accessed 19/09/2011

4. www.eric.org.uk ERIC – Education and Resources for Improving Childhood Continence

5. Constipation in children and young people NICE Clinical Guideline 99. May 2010

6. For more information on the management of constipation in children under 1 year old please refer to http://www.cks.nhs.uk/constipation_in_children/management/scenario_diagnosis_and_assessment_younger_than_1_year

Diagnosis of constipation in childhood

For diagnosis of functional constipation under the Rome III criteria symptoms must include at least two of the following:

- Two or fewer defecations per week
- At least one episode per week of faecal incontinence after the child has acquired toileting skills
- History of excessive stool retention or retentive posturing
- History of painful or hard bowel movements
- Presence of a large faecal mass in the rectum
- History of stools with large diameter that may obstruct the toilet

In infants and children up to a developmental age of 4 years, these symptoms must be present for least one month; in children over 4 years old, symptoms should be present for at least two months, with insufficient criteria for the diagnosis of irritable bowel syndrome.

Condition that may predispose to constipation in children

- Cystic fibrosis
- Dehydration
- Depression
- Hirschprung's disease
- Metabolic conditions (e.g. diabetes insipdus, hypothyroidism)
- Spinal cord abnormalities
- Painful anal conditions (e.g. anal fissure)
- Cerebral palsy
- Coeliac disease

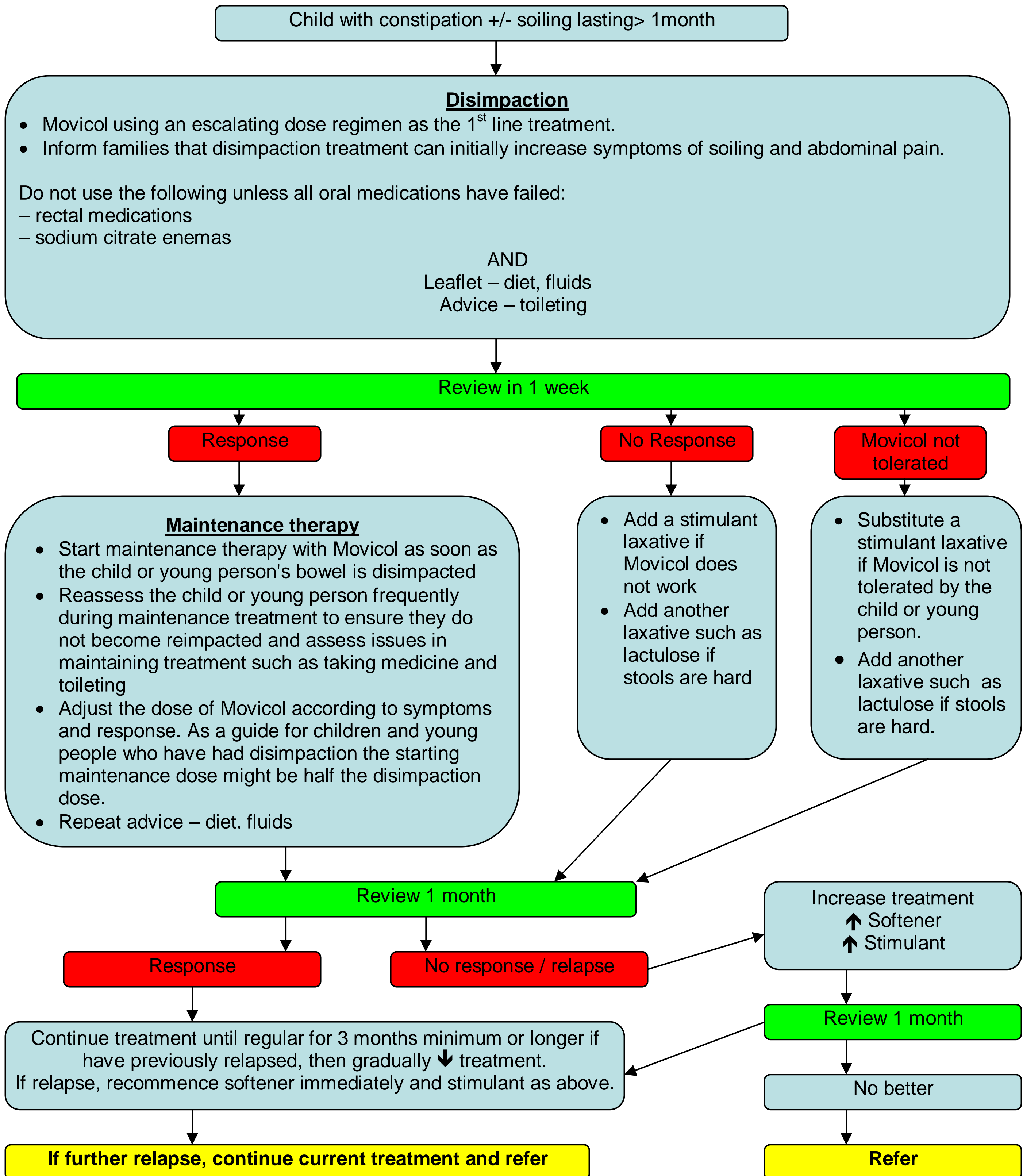
When to refer

GP referrals to the Bowel Management Clinic or the Children's Continence Nurse should be considered for the following:

- Children where constipation is prolonged (i.e. present for more than 6 months).
- Children with significant school problems associated with the condition.
- Children where there are significant behaviour problems.
- Children where toilet refusal is a major feature or other significant concerns.
- Children in whom treatment in primary care is not effective.
- Children in whom major feeding problems are present.

Dietary Advice

- Fruit juices that contain fructose and sucrose (e.g. pear, apple, prune)
- Encourage children to drink at least 6-8 cups of fluid per day.
- High fibre foods such as fruit, vegetables, and wholegrain cereals.
- Consideration to reducing child's intake of milk, particularly in those where milk is the main source of fluid intake. In those on formula milk this should only be under the care of a specialist.


Child with constipation +/- soiling lasting> 1month
Disimpaction
• Movicol using an escalating dose regimen as the 1st line treatment.
• Inform families that disimpaction treatment can initially increase symptoms of soiling and abdominal pain.
Do not use the following unless all oral medications have failed:
– rectal medications
– sodium citrate enemas
AND
Leaflet – diet, fluids
Advice – toileting
Review in 1 week
Response
No Response
Movicol not tolerated
Maintenance therapy
• Start maintenance therapy with Movicol as soon as the child or young person's bowel is disimpacted
• Reassess the child or young person frequently during maintenance treatment to ensure they do not become reimpacted and assess issues in maintaining treatment such as taking medicine and toileting
• Adjust the dose of Movicol according to symptoms and response. As a guide for children and young people who have had disimpaction the starting maintenance dose might be half the disimpaction dose.
• Repeat advice – diet, fluids
• Add a stimulant laxative if Movicol does not work
• Add another laxative such as lactulose if stools are hard
• Substitute a stimulant laxative if Movicol is not tolerated by the child or young person.
• Add another laxative such as lactulose if stools are hard.
Review 1 month
Response
No response / relapse
Increase treatment
↑ Softener
↑ Stimulant
Review 1 month
No better
Refer
Continue treatment until regular for 3 months minimum or longer if have previously relapsed, then gradually ↓ treatment.
If relapse, recommence softener immediately and stimulant as above.
If further relapse, continue current treatment and refer

Prescribing notes and paediatric use of laxatives

Dose

- **Lactulose** *solution*
Initial dose (then adjust to response)

- Under 1 year, 2.5mL twice daily, adjusted according to response.
- 1-5 years, 2.5mL twice daily to 10mL twice daily, adjusted according to response.
- 5-10 years, 5mL twice daily to 20mL twice daily, adjusted according to response.
- Above 10 years, 5mL twice daily to 20mL twice daily, adjusted according to response.

- Senna *tablets 7.5mg; syrup 7.5mg/5mL*

- Child 1 month to 4 years: 2.5–10 ml once daily
- Child/young person 4–18 years: 2.5–20 ml once daily
- Child 2–4 years: ½–2 tablets once daily
- Child 4–6 years: ½–4 tablets once daily
- Child/young person 6–18 years: 1–4 tablets once daily

- **Sodium picosulfate** *liquid 5mg/5mL*

- Child 1 month to 4 years: 2.5–10 mg once a day
- Child/young person 4–18 years: 2.5–20 mg once a day

- **Movicol® Paediatric Plain** *oral powder (macrogol '3350' (polyethylene glycol '3350') 6.563g, sodium bicarbonate 89.3mg, sodium chloride 175.4mg, potassium chloride 25.1mg/sachet).* The contents of each sachet should be dissolved in quarter of a glass (approx. 60-65 mL) of water. The reconstituted solution should be kept in a refrigerator and discarded if unused after 24 hours.

Faecal Impaction:
Paediatric formula: Oral powder: macrogol 3350 (polyethylene glycol 3350)b 6.563 g; sodium bicarbonate 89.3 mg; sodium chloride 175.4 mg; potassium chloride 25.1 mg/sachet (unflavoured).
- Child under 1 year: ½–1 sachet daily
- Child 1–5 years: 2 sachets on 1st day, then 4 sachets daily for 2 days, then 6 sachets daily for 2 days, then 8 sachets daily
- Child 5–12 years: 4 sachets on 1st day, then increased in steps of 2 sachets daily to maximum of 12 sachets

Adult formula: Oral powder: macrogol 3350 (polyethylene glycol 3350) 13.125 g; sodium bicarbonate 178.5 mg; sodium chloride 350.7 mg; potassium chloride 46.6 mg/sachet (unflavoured).
- Child/young person 12–18 years: 4 sachets on 1st day, then increased in steps of 2 sachets daily to maximum of 8 sachets daily.

Ongoing Maintenance (Chronic Constipation, Prevention of Faecal Impaction

Paediatric formula: Oral powder: macrogol 3350 (polyethylene glycol 3350)b 6.563 g; sodium bicarbonate 89.3 mg; sodium chloride 175.4 mg; potassium chloride 25.1 mg/sachet (unflavoured).

- Child under 1 year: ½–1 sachet daily
- 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)

Adult formula: Oral powder: macrogol 3350 (polyethylene glycol 3350) 13.125 g; sodium bicarbonate 178.5 mg; sodium chloride 350.7 mg; potassium chloride 46.6 mg/sachet (unflavoured).

- Child/young person 12–18 years: 1–3 sachets daily in divided doses adjusted according to response; maintenance, 1–2 sachets daily

Prescribing notes

- Movicol Paediatric Plain is the only macrogol licensed for children under 12 years that includes electrolytes. It does not have UK marketing authorisation for use in faecal impaction in children under 5 years, or for chronic constipation in children under 2 years. Informed consent should be obtained and documented. Movicol Paediatric Plain is the only macrogol licensed for children under 12 years that is also unflavoured.
- In children, the oral route is preferred to rectal. If, however, oral drugs fail and the child is not distressed then rectal bisacodyl (5mg suppository if under 10 years) or sodium citrate enema (Micralax Micro-enema®/Micolette Micro-enema®; insert half enema nozzle length if under 3 years) can be tried.
- After an episode of acute constipation, maintenance therapy may be required for several months or longer until regular bowel habit is established.
- Lactulose should be given with meals to reduce risk of dental caries.
- Lactulose is contra-indicated in galactosaemia, and should be used with caution in children with lactose intolerance.
- Movicol® Paediatric Plain is effective in established slow transit constipation on specialist advice.
- Docusate liquid is an alternative stimulant laxative. It may be diluted with milk or squash to mask taste.
- For more information on the management of constipation in children under 1 year old please refer to: http://www.cks.nhs.uk/constipation_in_children/management/scenario_diagnosis_and_assessment_younger_than_1_year

Techniques to help with toileting

- Encourage regular use of the toilet i.e. everyday.
- Allow the child unhurried time on the toilet.
- Keep a diary of toileting. This may be combined with a reward system geared towards successful use of the toilet as opposed to clean pants which may encourage child to hold on.
- Avoid punishing for soiled pants as this is beyond child's control.
- Sitting for five minutes twice a day every morning and every evening and pushing is very beneficial.
- While sitting on the toilet have feet resting on a step or box so their knees are higher than hips.
- Ensure medicines are given regularly every day.
- Encourage use of tummy muscles to actively try for poo e.g. by blowing bubbles.

Good source of patient information on potty and toilet training is ERIC – Education and Resources for Improving Childhood Continence www.eric.org.uk

The Children's Department at Gateshead Health NHS Foundation Trust also have a number of useful in-house patient information leaflets available