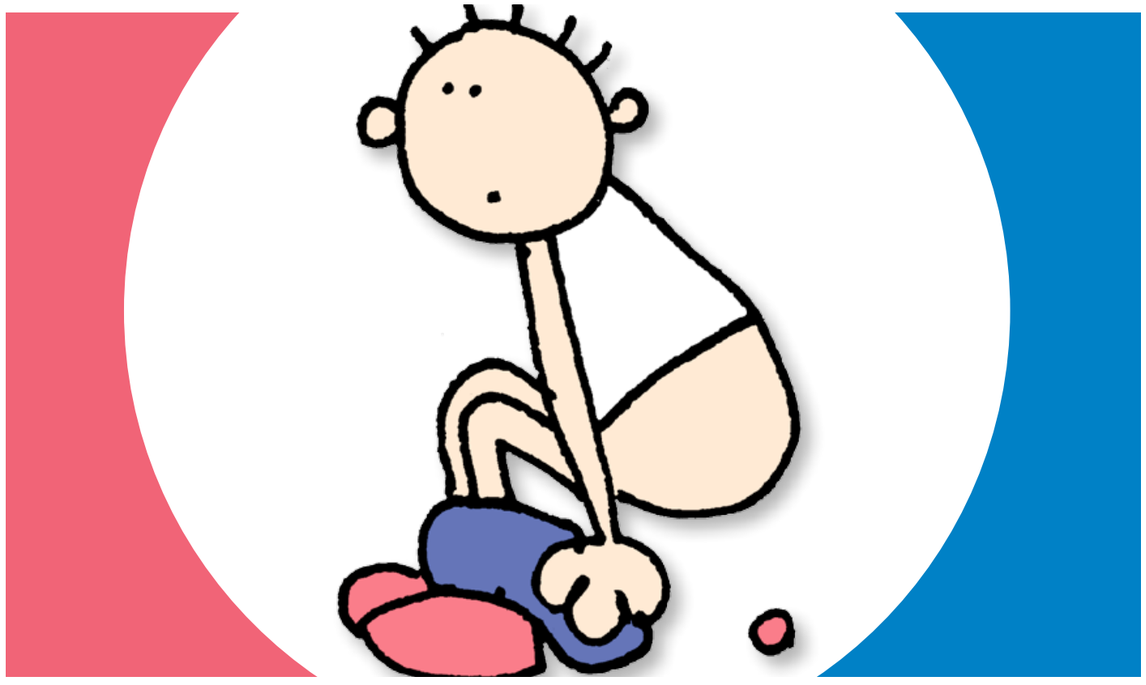
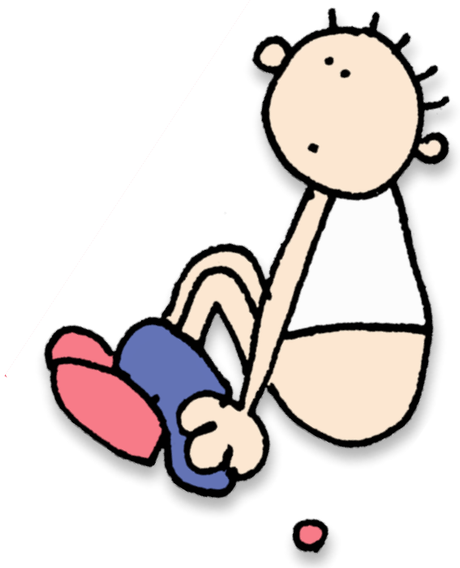
Tameside Hospital NHS
NHS Foundation Trust

Guidelines for the management of a Child with Constipation

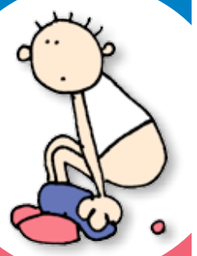


A Guide for Health Professionals

Compiled by Elizabeth Mackin, RGN, RSCN, BSc
Hons Specialist Community Practitioner, July 2010



bang on the door™©

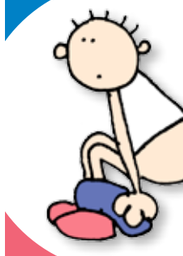


Notes:

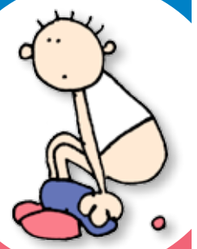
Guidelines:

These guidelines aim to guide health professionals when undertaking the care and management of a child diagnosed with functional constipation.

The aim of these guidelines is to outline the different management options available for the treatment of constipation in children from first presentation. The guidelines are research based, but where research does not exist, they are based upon an agreement of current best practice. Although common, constipation is a poorly understood condition. Children with constipation can become psychologically as well as physically distressed and careful management is always essential. Constipation is self perpetuating, the longer the duration of the symptoms the more difficult treatment becomes. In most cases the problem of constipation is of short duration and of little consequence: however, chronic constipation can follow from an inadequately managed acute problem and overly cautious under treatments can actually compound the problem (Rasquin-Weber 1999). Chronic constipation can lead to progressive faecal retention, distension of the rectum and loss of sensory and motor functions. Constipation is considered chronic if it continues for more than two months (PACCT group 2004). Soiling occurs when the child has been constipated for several months. Normal stool frequency in infants and children is difficult to define, but ranges from an average of four bowel movements a day in the first week of life to two a day at the age of one. The normal adult range of 3 stools per day to 3 stools per week is usually attained by the age of four (Rogers 2005). The best way to prevent constipation in infancy is to encourage breastfeeding as most breastfed babies regularly pass loose, frequent stools (Candy 2008). Mothers experiencing problems whilst breastfeeding should be referred to the breastfeeding co-ordinators on 0161 368 4242. Movicol has revolutionized the management of childhood constipation and should be used as first line management for all infants and children diagnosed as having functional constipation. Taking a thorough history and performing a physical examination are an important part of the complete evaluation of a child with constipation and is sufficient to diagnosis functional constipation in most cases (Chung et al 2009).



Childhood Constipation



Childhood Constipation

DEFINITIONS:

CONSTIPATION is characterised by infrequent bowel evacuations; hard, small faeces; or difficult or painful defecation. The most common cause of constipation is functional and can be defined as either having hard pellet-like stools or firm stools two or less times per week in the absence of structural, endocrine or metabolic disease (PACCT group 2004).

SOILING is caused by the softened stool leaking around the hard stool. It is often referred to as overflow. The faeces are often loose, foul smelling and gritty. It is an involuntary action over which the child has no control.

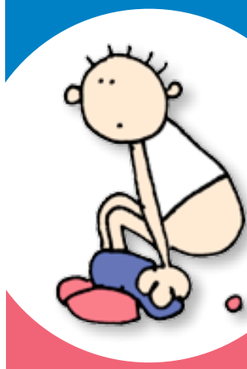
ENCOPRESIS is the passage of a normal stool in socially inappropriate places. The child has normal bowel sensation and if examined the rectum is usually empty. It is often associated with other behavioral problems.

FAECAL IMPACTION occurs when there has been no adequate bowel movement for several days or weeks, and a large, compacted mass of faeces builds up in the rectum and/or colon which cannot be easily passed by the child. Symptoms include failing to pass a stool for several days followed by a large often painful or distressing bowel motion. Between bowel movements children with faecal impaction often soil their underclothes.

THE MANAGEMENT OF CHRONIC CONSTIPATION AND FAECAL IMPACTION HAS THREE MAIN COMPONENTS (Cato-Smith 2005).

1.EDUCATION. This is the most important component for success in the management of constipation and may need to be repeated several times. It is important to give a clear explanation of the pathophysiology of constipation and associated soiling to the parents and children in order to maintain motivation and compliance with treatment. Give verbal information supported by but not replaced by written information or website information in several forms, about how the bowels work, symptoms that might indicate serious underlying problem, how to take their medication, what to expect when taking laxatives, how to open your bowels, origins of constipation, criteria to recognise risk situations for relapse such as worsening of any symptoms and soiling. The importance of continuing treatment until advised until otherwise by the healthcare professional.

Notes:



Childhood Constipation

Appendix 2

Lewis (1997).

Bristol Stool Chart

Type 1		Separate hard lumps, like nuts (hard to pass)
Type 2		Sausage-shaped but lumpy
Type 3		Like a sausage but with cracks on its surface
Type 4		Like a sausage or snake, smooth and soft
Type 5		Soft blobs with clear-cut edges (passed easily)
Type 6		Fluffy pieces with ragged edges, a mushy stool
Type 7		Watery, no solid pieces. **Entirely Liquid**

Childhood Constipation

It is vital to complete disimpaction prior to starting maintenance therapy.

2.DISIMPACTION.

ORAL: This route is not invasive and may give a sense of control to the child but adherence to the regime may be a problem.

RECTAL: Expert consensus opinion is that the use of suppositories and enemas are rarely indicated as they are invasive and distressing for the child.

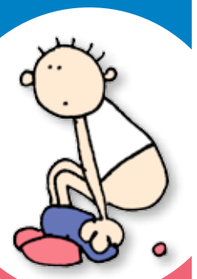
MANUAL EVACUATION: With modern oral therapies, manual disimpaction is rarely performed.

3. MAINTENANCE THERAPY: Once the faecal impaction has been removed, the treatment then focuses on the prevention of a recurrence of impaction. The goal is to achieve one soft stool per day. The minimum acceptable is more than 3 stools per week with no pain or soiling.

MAINTENANCE THERAPY HAS FOUR COMPONENTS:

1. DIET AND FLUIDS: Acute simple constipation can usually be treated with a high fibre diet and sufficient fluid intake. In chronic idiopathic constipation, diet and lifestyle interventions remain important but should be carried out in conjunction with laxative therapy and behavioural modification. An adequate fluid intake is imperative, at least 6-8 cups of per day for children (APPENDIX 1). Encourage water based drinks. i.e. fruit juice, cordial, not milk. Excessive milk drinking reduces the appetite for solid food and because milk has a low residue and calcium content it may be constipating (Rogers 1997).

2.TOILETING PROGRAMMES AND MEDICATION: Encouragement and praise for regular toileting and compliance with medication, try to move the focus away from having clean pants as this can encourage retention of stools and hiding underclothes, use age appropriate reward systems and star charts. Close supervision, privacy and pleasant accessible facilities both at home and school are essential. In the younger child if their feet don't touch the floor it is important that they are supported on a footstool; this ensures that they are in a comfortable position to allow them to push. For older children it helps to establish a regular routine of going to the toilet after breakfast and evening meal. Leave plenty of time so that there is no rush. Children who are toilet training should remain on laxatives until toilet training is well established.



3.FOLLOW UP: Provide tailored follow-up for children and their parents according to the response to treatment. Regular planned review with the family, by telephone or appointment to monitor progress and adjust medication as needed and to offer praise and encouragement for them to carry on with the programme. Encourage parents to contact you with any problems.

Evidence shows that the best results are achieved with regular contact, motivation and support.

4.WEANING OFF MEDICATION: Aim to wean medication when the child has been regularly passing soft formed stools for at least 6 months (appendix 2), and then attempt a slow withdrawal over a period of months in response to stool consistency and frequency. Signs that treatment is no longer required are when the stools become loose, as would happen if Movicol was given to someone without constipation. Some children may require laxative therapy for several years. A minority may require ongoing laxative therapy.

FLOW CHART FOR THE TREATMENT OF FUNCTIONAL CONSTIPATION AND FAECAL IMPACTION.

Clinicians can choose to enter the pathway at any stage depending on the history, severity of the symptoms and compliance to medication.

Movicol and Movicol paediatric Plain are recommended as first line management for disimpaction and maintenance treatment (NICE 2010).

Refer children to Children's Community Nursing Team at Tameside Hospital on 0161 922 5251 for extra support and advice if needed once a diagnosis of functional constipation has been made.

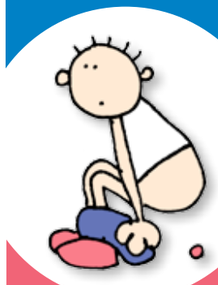
Demystification of the problem.
Dietary modifications to ensure a balanced diet and sufficient fluid intake
Daily intake of fibre (age +5= number of grams of fibre daily in children older than two years)
Increase fluids (at least 6-8 drinks per day) Appendix 1.
Take more exercise.
Establish a toileting routine .
For further information and advice visit www.childhoodconstipation.com
Offer review after one month or sooner if required.

Appendix 1.

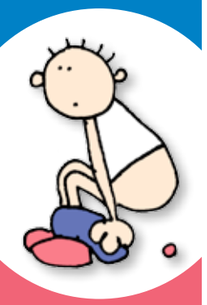
American dietary recommendations: Institute of medicine 2005).

	Total water intake per day, .	Water obtained from drinks per day.
infants 0-6 months	700 ml assumed to be from breast milk	600ml
7-12 months	800 ml from milk and complementary foods	600ml
1-3 years	1300 ml	900 ml
4-8 years	1700 ml	1200 ml
boys 9-13 years	2400 ml	1800 ml
girls 9-13 years	2100 ml	1600 ml
boys 14-18 years	3300 ml	2600 ml
girls 14-18 years	2300 ml	1800 ml

The above recommendations are for adequate intakes and should not be interpreted as a specific requirement. Higher intakes of total water will be required for those who are physically active or who are exposed to hot environments. It should be noted that obese children may also require higher intakes of total water.



Childhood Constipation



Childhood Constipation

REFERENCES :

Candy D (2008) Constipation in infancy. Accessed on line 04.10.2008. http:/www.aptamil4hcps.co.uk

Catto-Smith A (2005) Constipation and toileting issues in children. The Medical Journal of Australia. Vol.182, No.5, p. 242-246.

Chung S, Cheng A, Goldman R (2009) Polyethylene glycol 3350 without electrolytes for the treatment of childhood constipation. Canada family physician. May Vol 55(5), P.481-482.

Lewis SJ, Heaton KW (1997) Stool form scale as a useful guide to intestinal transit time. Scandinavian Journal of Gastroenterology Vol 32, p. 920-4.

Institute of medicine (2005) Dietary reference intakes of water, potassium, sodium chloride and sulphate. Washington DC: The National Academic Press.

Michail S, Gendy E, Preud'Homme D, Mezzos A (2004) Polyethylene glycol for constipation in children younger than eighteen months old. Journal of pediatric gastroenterol nutrition. Vol.39, p.197-9.

National Institute for Health and Clinical Excellence (2010) CG99 Diagnosis and management of idiopathic constipation in primary and secondary care. May 2010 London.

PACCT group (2004) accessed online 06.01.06. http://bspghan.org.uk.

Rasquin-Weber et.al. (1999) Childhood functional gastrointestinal disorders. Gut. Vol.45 (supplement 2)

Rogers J (2005) Reducing the misery of constipation in children. Practice Nursing. Vol.1, No.1. P.12-16.

Rogers J (1997) Childhood constipation and the incidence of hospitalisation. Nursing Standard.Vol.12, No.8, p.40-42.

Vincent R, Candy D (2001) Movicol for the treatment of faecal impaction in children. Gastroenterology Today.Vol.11, No2 summer 2001.

If no improvement introduce a stool softener.

Lactulose (3.35g in 5mls)

Dose	Maximum dose
<1yr 2.5mls BD	10mls per day
1-5yrs 5mls BD	40-90mls per day
5-10yrs 10mls BD	40-90mls per day
>10yrs 15mls BD	40-90mls per day

Adequate fluid intake essential due to the osmotic effect of lactulose.

Ensure that children clean their teeth thoroughly after taking lactulose.

Review after one month or sooner if required

If no improvement check compliance and add a stimulant.

Senna syrup 7.5mg/5mls

1 month-1yrs 0.5mls/kg (max 2.5mls) nocte.

2-4yrs 2.5-5mls nocte.

5-10yrs 5-10mls nocte.

> 10yrs 10-20mls nocte.

Senna should not be increased suddenly if there is faecal loading or severe colic. Advise parents to increase dose in 2.5ml stages every few days until a regular bowel action is achieved.

Review after one month or sooner if required.

Treatment for infants younger than one year.

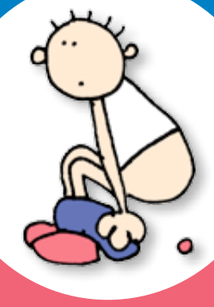
Dose of Movicol Paediatric Plain for infants required for disimpaction is

1gm per kg per day.

1 sachet of Movicol paediatric plain contains 7gms.

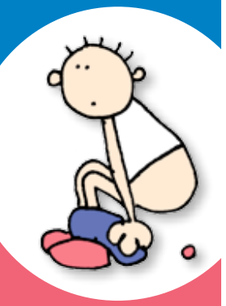
(Michail 2004, Candy 2008, Chung et al 2009, NICE 2010).

Maintenance dose should be titrated down so that a soft formed stool is passed daily. Continue on maintenance dose for at least one month, longer if the problem has gone on for many months, before gradually reducing and stopping the medication.



Childhood Constipation

Childhood Constipation



If no improvement check compliance and commence Movicol as a single agent.

Movicol Paediatric Plain for children aged 1-11yrs (Vincent and Candy 2001)

age	day 1	day 2	day 3	day 4	day 5	day 6	day 7
Number of sachets of Movicol Paediatric Plain per day for faecal impaction.							
1-4yrs	2	4	4	6	6	8	8
5-11yrs	4	6	8	10	12	12	12

The daily number of sachets should be taken in divided doses. Mix each sachet with 62.5mls of fluid, all to be consumed within a twelve hour period.

Movicol for children 12yrs and over.

Day 1	Day 2	Day 3	Day 4	Day 5	Day6	Day 7
4	4	6	6	8	8	8

The daily number of sachets should be taken in divided doses. Mix contents of each sachet in 125mls of fluid, all to be consumed within a 6 hour period.

If no improvement after 2 weeks add a stimulant (Nice 2010).

The above regimes should be stopped once disimpaction has occurred. An indication of disimpaction is the passage of a large volume of a type 6-7 stool.(Appendix 2) After disimpaction the sachets should be reduced by 2 sachets a day until a soft type 4-5 stool is being passed.(Appendix 2)

If successful commence maintenance therapy.

Movicol paediatric plain 1-11yrs.
1-6yrs half -one sachet daily.
7-11yrs two sachets daily.
Max 4 sachets per day.

Movicol 12yrs and over.
1-2 sachets daily
Max 4 sachets per day.

Parents should be advised to adjust the dose up and down as required to produce a soft stool each day. The minimum accepted is more than 3 stools per week with no pain or soiling. Continue with maintenance therapy for at least 6 month's sometimes much longer, before attempting a slow withdrawal. If the child relapses recommence the titrated dose of movicol to remove the impaction and recommence maintenance therapy. Signs that treatment is no longer required are when their stools become loose, as would happen if Movicol was given to someone without constipation. Provide tailored follow up according to the child's response to treatment.

Useful contact: Children's Community Team. Tameside General Hospital 0161 922 5251.

If no improvement refer to Hospital Consultant.

Childhood Constipation