NHS Greater Glasgow and Clyde
Yorkhill Hospital

CONSTIPATION IN CHILDREN
Background

Constipation is a common complaint in infants and children. The aetiology of constipation is multi-factorial and seldom caused by structural, endocrine or metabolic disease. In many children, constipation is triggered by experience of painful bowel movements, caused by factors such as toilet training, change in routine or diet, stressful events, intercurrent illness or delaying defaecation.

Constipation can present at three common stages of childhood:

in infancy at weaning,
in toddlers acquiring toilet skills
at school age.

Signs of straining in infants < 1 yr do not usually suggest constipation because they only develop muscles to assist bowel movements gradually, provided that they pass soft stool and are otherwise healthy.

What is it?

Constipation is the subjective complaint of passing abnormally delayed or infrequent dry hardened faeces which is difficult and distressing.

A diagnosis must include 2 or more of the following (using the Rome 111 criteria)

- < 3 bowel movements per week
- a history of painful or hard bowel movements
- at least 1 episode of faecal incontinence per week
- a history of excessive stool retention or retention posturing.
- presence of large faecal mass in rectum
- a history of stool so large that may obstruct the toilet

This must be present for 4 weeks in infants and children < 4 years and for 8 weeks in children over 4 years.

Soiling: - the involuntary passage of fluid or semi solid stool into clothing, usually as a result of overflow from a faecally loaded bowel. May be due to spurious diarrhoea or faecal incontinence and usually described by parents as staining in underwear.
Faecal Impaction: - this occurs when there has been no adequate bowel movement for several days/weeks and a large compacted mass of faeces builds up in the rectum and/or colon which cannot be passed easily by the child.

‘Normal’ bowel function: - The ‘normal’ frequency of bowel movements varies from child to child and varies widely.

<table>
<thead>
<tr>
<th>Age</th>
<th>Mean</th>
<th>Per Week</th>
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<tr>
<td>0-3 months</td>
<td>2.9/day</td>
<td>5-40</td>
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<tr>
<td>3 years and over</td>
<td>1.0/day</td>
<td>3-14</td>
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Bowel motions in breast fed babies can be very variable. It is not common, but some babies can have infrequent motions sometimes once in 7 or even 10 days.

Most children have no underlying organic cause for constipation i.e. they have functional constipation. Organic causes are uncommon and found more frequently in infants < 1 yr.

What causes it?

Organic causes

- Hirschsprungs Disease
- Cystic Fibrosis
- Metabolic conditions eg hypothyroidism
- Neurological disability eg cerebral palsy
- Anorectal anomalies

Non-Organic causes/Risk factors
Many drugs - Antihistamines/anticonvulsants/iron supplements and many more
Intolerance to cows milk
Inadequate fluid intake
Poor diet including excess milk
Low fiber diet
Lack of exercise
Obesity

[Remember: 1) Sexual abuse may precipitate constipation and if considered - refer appropriately
2) Streptococcal infection of the perineal area is common in infants - treat with antibiotics]

**ASSESSMENT**

**History:**

- Delay of passage of meconium > 24 hrs after birth
- Duration
- Frequency, consistency and size of stool
- Pain or bleeding when passing stool
- Type of diet/milk
- Medication that can cause constipation
- Poor Appetite, nausea and vomiting
- Abdominal pain/distension
- Behavior – withholding/posturing
- Soiling
- Is child thriving?
- Rectal prolapse

**EXAMINATION**

- Any evidence of failure to thrive
- Abdominal tenderness/distension/faecal loading
- Position of anus/anal fissure/skin tags/sacral anomalies
- Check lower back/ neurological assessment of lower limbs if indicated
- Visual assessment of anus / no digital rectal examination necessary
INVESTIGATIONS

Decide if Functional or Organic. If Organic investigate and refer appropriately. No investigation necessary if Functional.

TREATMENT

Constipation can be difficult to treat and often requires prolonged support, explanation, encouragement and medical treatment.
Aim to empty bowel, keep bowel empty and prevent recurrence.
Clear any impaction. Restore a bowel habit so stools are soft and passed without discomfort.
Treatment starts with education of parents/carers and children (as appropriate for age).
Constipation may be Acute or Chronic.

Acute constipation 1-3 weeks (generally precipitated by transient illness eg viral or febrile illness)
Ensure adequate fluid intake/good diet and may need lactulose or movicol for a short period of 1 week followed by GP review and reassessment thereafter.
(NB not disimpaction regime if movicol used)

Chronic Constipation

Infants

1 – 6 mths

Problem from birth/neonatal period/not passed meconium first 24 hrs.
Discuss with Senior, possible Hirschsprungs Disease – refer for Surgical opinion.
Type of milk – If formula fed, maintain on 1st formula for age and not overfed.
Ensure adequate fluid intake (150mls/kg).
Lactulose
Or
Movicol
For Disimpaction – movicol
If already on treatment by GP (invariably Lactulose), can increase Lactulose and/or add Senna or change to Movicol.

**Maintenance regime:- Laxatives**
- Macrogol
- Movicol ½ to 1 sachet daily
- Or
- Osmotic
- Lactulose 2.5 mls BD (adjust to response)
- Or
- Lactulose and Senna (Stimulant) 2.5 mls once daily

**Disimpaction regime:-** Movicol ½ - 1 sachet daily. If not tolerated - Lactulose and Senna.

**6 mths – 1 yr**

Ensure adequate fluid intake
Ensure not overfeeding and no excess milk
Lactulose
Or
Movicol
May benefit from dietetic referral/assessment/follow up, if diet is thought to be poor
Abdominal pain with distension+/- vomiting – discuss with Senior, possible referral for Surgical opinion
Anal fissure Lactulose or movicol/Topical L.A. ointment.

**Maintenance regime:- Laxatives**
- Macrogol
- Movicol ½ to 1 sachet daily
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- Osmotic
- Lactulose 2.5 mls BD (adjust to response)
- Or
- Lactulose and Senna (Stimulant) 2.5 mls once daily

**Disimpaction regime:-** Movicol ½ - 1 sachet daily. If not tolerated - Lactulose and Senna.
Children > 1 yr

Ensure adequate fluid intake
Ensure adequate diet/fibre - refer to dietitian if necessary.
Movicol as per simple regime or lactulose
Impaction – treat with disimpaction Movicol regime, followed by
maintenance Movicol.
Adequate exercises – active lifestyle
Regular toileting
Behavior modification :- toilet training/rewarding/toilet diaries etc.

| Maintenance:|
| Movicol - |
| 1-6 yrs - 1 sachet daily (adjust to response to max of 4 sachets/day) |
| 6-12 yrs - 2 sachets daily (to a max of 4 sachets/day) |
| >12 yrs - apply adult regime. |
| Lactulose - |
| 1-5 yrs - 2.5 to 10 mls BD (adjust to response) |
| >5 yrs - 5 to 20 mls BD (adjust to response) |
| Senna - |
| 1-4 yrs - 2.5 to 10 mls once daily |
| >4 yrs - 2.5 to 20 mls once daily |

| Disimpaction:|
| Movicol - |
| 1-5 yrs - 2 sachets on day 1, then 4 sachets for 2 days, then 6 sachets for 2 days and 8 sachets daily thereafter. |
| 5-12 yrs - 4 sachets on day 1, then increase by 2 sachets daily until max of 12 sachets daily. |
| >12 yrs - see adult regime (BNF) |

If disimpaction not achieved by 2 weeks, add a stimulant laxative like Senna.
If Movicol is not tolerated, use Lactulose and Senna for disimpaction.

Enemas can be considered in cases undergoing disimpaction who do not have the required result from the medicine regime, if they are on maximum medication, and have been compliant with treatment. Discuss with Consultant, if considered.
Follow up/ When to refer?

(1) All children undergoing disimpaction should be reviewed by GP after 1 week.
(2) Patients with Organic causes should be referred to appropriate Departments- Surgical/ Medical/ Neurological/ Metabolic.
(3) Complex cases – refer to Medical OPD
   eg :- Constipation interfering with child’s schooling and social relationships.
   Child has been receiving treatment, but this has been ineffective.
   Faecal incontinence (soiling) and distress are frequent.
   Constipation persisting for more than 6 months

Discuss with Consultant on call cases if considering referral to Medical OPD.

Bristol Stool Chart

Parental Guidance leaflet/book

References: SIGN guidelines (Constipation in childhood) May 2010
BNF for children 2010