Understanding Constipation in Infants and young toddlers

Information for Health Care Professionals
This booklet has been developed to provide information for both healthcare professionals and carers regarding the identification and treatment of constipation in children and young children.

Constipation is a common problem that can effect up to 28% of all children and has been recognised as being amongst the most common infant digestive problem reported by parents. We know from experience that the sooner the problem is identified and treated the easier it is to manage. Frequently however the problem is not really recognised until the child starts potty training when it is often more difficult to treat, particularly when the child is reluctant to open their bowels because of fear or discomfort.

If we can identify and treat children with constipation as soon as the problem is recognised then it is going to be easier for everyone. There are often unfounded concerns regarding the use of laxatives with babies but the simple message should be that if fluid and dietary manipulation alone fails to resolve the problem then laxatives are licensed for and can be safely used in this age group.

In fact if constipation is not treated effectively it will become chronic with all the associated problems including abdominal pain, loss of appetite and constant soiling which can obviously be a concern for when the child starts school or nursery.
The first stool - Meconium

The first stool passed following birth is called meconium and is often green in colour and very sticky. It is passed within the first 24 hours in about 87% of infants and within 48 hours by 99% (Griffin & Beattie 2001).

It is known that infants fed breast milk pass a softer and greater number of stools than those fed infant formula. The stool consistency in infants should be soft until weaning when it becomes firmer. The actual frequency of bowel movements in infants can vary a great deal depending on whether they are breast or bottle fed.

Normal frequency of bowel movements in children

<table>
<thead>
<tr>
<th>Age</th>
<th>Bowel movements per week a</th>
<th>Bowel movements per day b</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-3 months breast fed</td>
<td>5 to 40</td>
<td>2.9</td>
</tr>
<tr>
<td>0-3 months formula fed</td>
<td>5-28</td>
<td>2.0</td>
</tr>
<tr>
<td>6-12 months</td>
<td>5-28</td>
<td>1.8</td>
</tr>
<tr>
<td>1-3 years</td>
<td>4 to 21</td>
<td>1.4</td>
</tr>
<tr>
<td>&gt; 3 years</td>
<td>3 to 14</td>
<td>1.0</td>
</tr>
</tbody>
</table>

*a* mean ± 2 SD.  
*b* Mean

Adapted from: Fontana et al. Approximately
Why are breast fed babies stools different?

Breast milk contains proteins and oligosaccharides that are not digested - resulting in an increase in volume and softer consistency of stool.

Breast fed babies tend to be fed ‘on demand’ - more frequent feeding results in more stimulation of gastrocolic reflex.

However as the infant matures normal physiological changes occur within the intestine and colon resulting in a decreased number of stools.

Transit time – (The time it takes for the feed to come out at the other end as poo!)

The decline in frequency of bowel actions with age correlates with decreased bowel transit times.

An older study identified a decrease in transit time from 8.5 hours in infants aged 1-3 months to a mean transit time of 16 hours in a group of infants aged 4 to 24 months (Weaver & Steiner 1984).

In determining if an infant is constipated it is important therefore to look at not only frequency of evacuations but the consistency as well, as it is normal for the frequency of stools to reduce over time.
Possible causes of constipation in infants

- Formula feed not made up correctly (too concentrated with not enough water)
- Weaning - Introduction of solid food but without enough drinks in between meal times
- Not enough fibre
- High dairy food intake (cows milk etc) can affect some babies

Formula feeds

- Families need to ensure feeds are made up correctly
- Some studies have reported that formula feeds containing Betapol® (a unique triglyceride mix of vegetable oils) help to reduce constipation \( (Lucas \ et \ al \ 1997) \)
- Differences in digestion are observed in breast milk and milks containing Betapo®, where palmitic acid occupies a mid position on the triglyceride structure, making it more easily absorbed and reducing the risk of constipation \( (Bongers \ et \ al \ 2007) \)

It is important to remember that breast feeding should always be promoted and any introduction or changes of formula feeds should only be done on the advice of a healthcare professional.
Some simple interventions parents can try

- **Abdominal Massage:** This should only be taught to parents by a qualified health professional.
- **Leg Exercise:** Lay the infant on their back and gently move their legs in a bicycle motion. This will cause the stomach muscles to move and put gentle stimulation on the infant's intestines and hopefully make them have a bowel movement.
- **Warm Bath:** Another way to help with infant constipation is by giving them a relaxing bath. The relaxation may help their stool pass more easily. During or after the bath, try gently massaging the tummy.
- **Fruit juice/puree:** Depending on the age of the infant – dilute fruit juice containing sorbitol – such as apple or pear could be tried.

If trying any of the above does not help then further advice should always be sought from a health care professional and in laxatives (e.g. Movicol PP) may need to be prescribed to prevent the constipation becoming chronic.
Infant Dyschezia

Sometimes babies can appear to strain and grunt or go red in the face when they have their bowels opened – but then pass normal soft stools.

What normally happens is that the infant has not yet figured out how to relax the pelvic floor during defeacation and when they feel the urge to go they often stretch out their legs thereby tightening the pelvic floor. Parents frequently say they have to 'help the poo come out' by bending and holding the babies legs up.

This problem is sometimes called 'infant dyschezia' and just means uncoordinated defeacation which will normally correct itself with time. It does not require treatment.
Suppressing defecation

- If an older infant/young child does not want to open their bowels for whatever reason they can inhibit defecation by tightening the external anal sphincter and squeezing the gluteal muscles.
- These actions push the stool higher up in the rectum and reduce the urge to defecate, if this is continually repeated the rectum eventually stretches to accommodate the retained stools and the propulsive power of the rectum is diminished.
- If this behaviour continues then the child will very quickly become constipated.

Holding on

This occurs commonly in toddlers who may have experienced the passage of an uncomfortable/painful stool. The longer the stool remains in the rectum, the larger and harder the stool becomes. A vicious circle develops with the child wanting to 'hold on' to avoid the further passage of potentially uncomfortable/painful stools.

It is important therefore that any changes in stool consistency or frequency that may indicate the potential development of constipation is addressed quickly to prevent the cycle of 'holding on' developing.
Key messages for infants

- Constipation is not an uncommon problem in infants, particularly if they are fed infant formula
- Parents need to be advised to always seek health care advise if they suspect constipation is present to ensure timely appropriate treatment
- If simple interventions fail to resolve the constipation laxatives should be prescribed to prevent the problem becoming chronic

Working with toddlers

Remember it is almost impossible to get their cooperation!

- Encourage parents to increase fluid and fibre but don’t make it the focus of treatment
- Don’t address potty training and resolving constipation at the same time
- Allow ‘poo nappies’. If the child insists on using a nappy to poo then allow them to use a nappy but it must be only in the bathroom/toilet area. Then encourage sitting on the toilet/potty with nappy on, eventually working on removing the nappy completely
- If simple interventions and dietary/fluid adjustment alone fail to resolve the problem of constipation then laxatives will need to be considered
- Laxatives to be given at sufficient doses to maintain regular soft stools (at least x 3 per week) and continued for as long as necessary
References and suggested further reading


http://www.nutritionj.com/content/6/1/8


Weaver LT, Steiner H (1884) The bowel habits of young children. Arch Dis Childhood, 59;649-652
Constipation in infants and toddlers is not uncommon but it is always important to seek the advice of a Healthcare Professional to exclude any underlying problem and prevent the constipation becoming chronic.

This booklet gives an overview of bowel habits in infants and a simple explanation of how constipation can develop and advice regarding what can be done to help.

Other booklets in this series:
‘Understanding toilet refusal – the child who will only poo in a nappy’
‘Understanding getting ready for toilet training’
‘Understanding nocturnal enuresis – improving treatment outcomes’
‘Understanding Toilet Training resources’

For further information contact PromoCon
PromoCon, working under the umbrella of Disabled Living, provides impartial advice and information regarding resources, products and services for children and adults with bladder and bowel problems
www.promocon.co.uk
Helpline: 0161 607 8219

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IMPORTANT NOTICE
Breast feeding is best for babies and a healthy balanced diet is important when breast feeding. A decision not to breast feed can be difficult to reverse. Also the introduction of partial bottle feeding will reduce the supply of breast milk, whereas continuing breast feeding will maintain a healthy supply of milk. An infant formula should be used on the advice of a doctor or health professional and the cost and any social implications of using infant formula should be considered when deciding how to feed your baby. If an infant formula is used, all the preparation and feeding instructions should be followed carefully, as this is important for your babies health.