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Constipation and Encopresis

Case study

Billy is a four-year-old boy. He was toilet trained for urine at the age of 2½ years. However he is avoiding the toilet for defaecation. Billy will hold on for days at a time then complain of pain as he passes a hard stool. He had occasional hard stools as an older infant. Billy was a picky eater as a toddler. He is often quite grumpy.

Billy has developed **constipation**. He may be feeling discomfort in the abdomen or experiencing colicky pain at times. His pattern of avoidance of a painful toileting experience may set up a cycle of faecal retention, which could eventually result in soiling, or **encopresis**.

Definitions and causes

Constipation is defined as the infrequent passage of hard stools. Constipation is common during childhood, occurring in up to 25% of children. Low dietary fibre intake, slow transit time, coercive toilet training, and in some children abnormal contraction of the anal sphincters and pelvic floor can all cause constipation. Anal fissures can occur secondary to passing large hard stools and may contribute to a cycle of pain and avoidance of defaecation. Medical causes such as thyroid deficiency, cow's milk protein allergy, spinal anomalies, and anatomical anal conditions are rare. Hirschsprung's Disease, a rare neurological muscle abnormality, usually

causes severe constipation from birth. Substance P deficiency also usually causes early constipation.

Breast-fed babies are rarely constipated, although stool frequency may vary considerably. In bottle-fed babies, it is important to be sure that the formula is correctly made up, as concentrated formula may exacerbate tendency to constipation. Weaning from breastmilk and onto solid foods and the period of toilet training are times when constipation may occur. Babies should be offered increased water, prune juice, stewed prunes and steamed vegetables if weaned. Stool softening laxatives may be added for slightly older children.

Encopresis is defined as the repeated and involuntary passage of stool into the clothing after the age of four years. Encopresis occurs in 3% of 4-year-old children and 1.6% of 10-year-old children, and is 2 to 3 times more common amongst boys than girls. This faecal retention and overflow can develop as a result of prolonged constipation, physiological incoordination of the lower bowel and anus muscles, incomplete evacuation (the busy boy), or toilet avoidance. Soiling may occur as leakage of loose stool (sometimes misdiagnosed as diarrhoea), or overflow of solid stool from the distended rectum. The distended rectum causes loss of the stretch sensation, and most children with encopresis are not aware of the need for, or the passage

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of stool. Many children with soiling also have normal bowel actions on the toilet, and many deny that they have soiled. Problems with self-esteem, angry and frustrated parents and social problems at school are common. Soiling without faecal retention may occur as a result of late toilet training with developmental delay, or with severe emotional problems and/or family dysfunction.

Assessment

Assessment should include the pattern of defaecation and/or soiling, dietary history, fluid intake, toileting behaviours including age of toilet training and child and family reactions.

Firm or hard stool felt in the left lower abdomen indicates quite significant faecal retention. The anus should be inspected. Rectal examination rarely adds useful information and is very intrusive for a child already concerned about elimination and control. Abdominal Xray for encopresis indicates the extent of faecal retention, and is a useful starting point to explain the physiological bowel changes to the child and parents.

Advice to manage constipation

Advice to manage constipation would include a healthy fibre diet, adequate fluids, and gentle encouragement to pass stool when he first feels sensation. Wholegrain breads and cereals, wholemeal pasta and rice, fruit and vegetables, dried fruits and peanut butter are good

sources of fibre. A high fibre diet is not advised as this may bulk up the stool and cause more difficulty in the passage of stool. Adequate but not excessive clear fluids will help soften the stool. Regular exercise is thought to help stool frequency. A child should be able to sit comfortably on the toilet with foot support to keep the feet flat.

Osmotic laxatives such as lactulose or stool softeners such as paraffin oil may be used if dietary changes are inadequate or refused. These are available over the counter.

Encouragement and advice should be provided to both the parent and the child. It is important to reinforce with parents the need for a supportive approach with their child, not a punitive approach.

It is important to treat constipation for an adequate period of time, and to treat early if symptoms recur.

Treatment of encopresis

Treatment of encopresis starts with an explanation to the child and parents of the physiological changes that occur with the distended bowel, emphasising the involuntary nature of the passage of stool and minimising the blame and shame that has often built up in the family. Issues of control are often powerful in the family, and coming to the realisation that the child must learn control of the bowels, rather than being forced to control the bowels is an important goal of counselling. Long term treatment

Figure 1. Example of a star chart

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

and follow up of encopresis is necessary, usually for a minimum of 6 months, and sometimes much longer.

Dietary advice for dealing with encopresis is the same as for dealing with constipation.

Regular sitting on the toilet for about 5 minutes 2 or 3 times a day after meals, supported by a behaviour modification program using a diary and star chart is advised (See Figure 1). This helps the child to take control and be more aware of his bodily needs and reactions. It also provides useful information at review about the pattern of the child's defaecation and soiling.

Depending on the frequency of soiling and degree of faecal retention, a combination regime of a colonic stimulant such as senna or bisacodyl, and a faecal softener such as paraffin oil or lactulose may be used initially. The dose of colonic stimulants should be monitored to avoid abdominal pain.

The physiological aim of treatment is to empty the bowel and keep it relatively empty over time in order to decrease rectal distension and allow return of rectal sensation. This in turn gives the child the chance to develop true control of the bowels. As the rectum decreases in volume, a period of urgent sensation may occur, resulting in accidents on the way to the toilet. It is important to reassure the child that these "urgency accidents" are a sign of improvement and will soon diminish as better control ensues.

Once good bowel control is reached laxatives should be withdrawn slowly, followed by a behavioural toileting program.

Referral for specialist opinion for constipation and encopresis

Referral for specialist opinion is warranted for severe constipation, suspicion of an underlying organic cause, or severe associated behavioural difficulties. Children with encopresis should be referred if treatment is unsuccessful, emotional or behavioural issues persist, or organic disease is suspected. Specialist treatment may include more intensive behavioural management, use of stronger laxatives and/or rectal medication to achieve

disimpaction, and investigation with anorectal manometry. Occasionally a child needs admission to empty the bowel, using a bowel preparation agent or colonic lavage solution. Follow up with a toileting program, laxatives and appropriate diet is essential to avoid recurrence of faecal retention.

What will happen to Billy in the future?

Treatment of constipation in childhood is successful in about 90% of children, but relapses can occur and should be managed very quickly. If Billy goes on to develop encopresis, treatment over time is successful in about 75% of cases. Long-term use of laxatives in appropriate dosage is very safe in children. Soiling is rare in adults.

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- **Raising Children Network –**
raisingchildren.net.au
- **Better Health Channel –**
www.betterhealth.vic.gov.au
- **The Children's Hospital at Westmead –**
www.chw.edu.au/parents/factsheets

Reflection Questions

- 1. How do you introduce the expectations and timing of toilet training, and how do you emphasise the child's individual readiness?***
- 2. How would you work with Billy's parents if they are getting cross and angry with him about needing to poo in the toilet and are making him sit there until "he does it"?***
- 3. What type of advice would you give to a parent about fibre in the diet?***

Leaping Early In Life

The developmental value of play in the early years of life is without question. Play is essential for the development of physical, social, intellectual and emotional health. Habitual physical activity in young children is also linked to a greater likelihood of skill progression, perceived physical competence, cardiovascular and musculoskeletal health, and weight management.

Promotion of activity in the early years of life predominately requires families and carers to provide time and opportunity for structured (adult guided) and unstructured physical activity (supervised, free play alone or with other children). Parents and carers are also expected to model positive practices and values to physical activity.

Developmentally appropriate activities for toddlers initially involve simple one-skill locomotive challenges such as running or jumping or manipulative activities such as throwing or hitting for distance. Toddlers learn physical activities through lots of opportunities to explore, imitate, and repeat challenges.

Developmentally appropriate activities for Infants and Toddlers

- Insufficient evidence for structured activities for increasing physical activity.
- No television for children < 2 years.
- Develop enjoyment of outdoor activity.
- Encourage unstructured exploration.

(Academy of Pediatrics, 2006)

In preschoolers, increased and extensive opportunities for a broad range of movement are necessary. Moving opportunities should include running, jumping, hopping, skipping, kicking and climbing. Skills develop when children are provided with sufficient time and the positive environment in which to explore and practice.

Developmentally appropriate activities for Pre-School Children (4-6 yrs)

- Fun, playfulness, exploration with safety and proper supervision.
- Unorganised play with minimal instruction.
- Run, swim, tumble, throw, catch.
- Begin walking tolerable distances.
- Reduce passive transportation (car and stroller).
- Limit screen time to < 2 hours per day.

(Academy of Pediatrics, 2006)

Decreasing sedentary behaviour

Understanding energy needs in the early years of life involves consideration of energy intake and energy output. In young children the notion of sedentary behaviour extends beyond consideration of the time spent in television viewing.

For infants, time spent in passive transport isn't just about sitting in cars. "Strollerisation" is one component of inactivity in the early years of life. The stroller is a popular labour-saving device that also saves time, and helps secure children in busy, crowded places. But for short journeys, strollers compete with opportunities for children to use large muscle groups, to improve coordination and postural development, as well as the opportunity for energy expenditure. From North America, the National Association for Sport and Physical Education advocate for parents to plan sufficient time to frequently allow children to do their own walking. (National Association for Sport and Physical Education, 2001)

Individual differences

Activity is mostly, but not always, natural or fun for children. A variety of guided prompts may be more necessary for some children than others. For children who do not always enjoy sessions encouragement can be

offered by recognition of effort rather than talking about fun. Adults should avoid comparisons to peers and siblings.

It is important to build the type of “activity” environment in which children feel most positive. Unstructured, outdoor play opportunities should occur on a daily basis. Both structured and unstructured play opportunities are likely to be most successful if they are low cost, convenient and are satisfying and challenging enough for the child to want to try again.

Make sure activity time is healthy in all respects

- Remember Sunsmart guidelines.
- Make sure there is always water to drink.
- Kids need regular snacks – take along some fruit, whole or pre-chopped, to offer on the way home or during a long session of play.
- Children are more sensitive to heat; limit outdoor activity when the temperature is high.

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- Academy of Pediatrics: Committee on sports medicine and fitness and council on school health. Active Healthy Living: Prevention of childhood obesity through increased physical activity. *Pediatrics* 2006; 117(5); 1834-1842.
- National Association for Sport and Physical Education. Active Start: A Statement of Physical Activity Guidelines for Children Birth to Five Years. 1900 Association Drive. Reston VA. 2001 <http://www.aahperd.org/naspe/template.cfm?template=toddlers.html>

Reflection Questions

1. Do you routinely ask parents about the types of physical activities they undertake with these children?
2. What are the greatest barriers to young children being active? What advice would you give to parents?
3. How would you encourage a parent to set up an environment to encourage imaginary play in the young toddler?



Tips for increasing physical activity

- Children learn by example, so if parents are active, children will be more active.
- Involve children in everyday activities around the house such as gardening, sweeping, washing the car and hanging out the washing.
- Walk short distances instead of driving.
- Keep a ball, frisbee and kite in your car.
- Dance to your favourite music, it is great fun.
- Riding a tricycle, bicycle or scooter should be encouraged.
- Children will be more active when they are outside, so make time to be outside.
- Visit the local playground, and children love it when parents play on the equipment too.
- Chasing bubbles is cheap, easy and fun.
- Playing with toys that need pushing such as prams, cars, trucks and lawn mowers requires activity. Even rolling out play dough can be physically demanding for young children.
- Show your child how to perform basic sporting skills, such as ball throwing, skipping and jumping. Research suggests that children whose basic skills are poor tend to avoid sports.
- Try different sports but make sure they are age-appropriate. Many activities have been adapted for young children, including gymnastics, football, t-ball and dancing.
- Visit the local swimming pool and swim and splash together.
- Limit the time spent watching TV or playing on the computer.

Editor's Note:

- *It has been drawn to our attention that the photo included on page 4 of Community Paediatric Review Vol 15 No 3 September 2006 shows a child sleeping on their side, which contravenes SIDS safe sleeping recommendations.*
Apologies for this oversight.
- *Thank you to everyone who returned the survey from the September edition. Your feedback is extremely valuable and ensures that we continue to provide the type of resources that supports your work.*

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