Randall Children's Hospital

Co-Management and Referral Guidelines
Management of Constipation
Pediatric Gastroenterology

Phone: **503-276-6138**
Fax: **503-276-6148**

Introduction

- Constipation is a common problem in pediatrics and contributes to substantial health care costs.
- Constipation is defined as 2 or more weeks of infrequent or difficult defecation.
- Affected children and their families can suffer significant distress.
- Constipation starts in the first year of life in up to 40 percent of children.
- Most children have functional constipation (no other identifiable underlying cause).

Evaluation and Management

Initial evaluation

- A careful history and physical exam should be performed in order to evaluate for causes other than functional constipation. Alternate causes include:
  - Anatomic malformations
  - Botulism
  - Celiac disease
  - Cystic fibrosis
  - Diabetes mellitus
  - Dietary protein allergy
  - Drugs and toxins
  - Hirschsprung's disease
  - Hypercalcemia
  - Hypokalemia
  - Hypothyroidism
  - Pelvic mass
  - Spinal cord abnormalities
  - Vitamin D intoxication
- Testing for hypothyroidism, celiac disease and/or hypercalcemia may be considered if the child has suggestive symptoms.
- Obtain a lumbar spine MRI or refer to pediatric neurosurgery if the child has an absent anal reflex, decreased lower extremity strength/tone/reflex, a tuft of hair on the spine and/or gluteal cleft deviation.
- When a fecal impaction is suspected but a physical exam is unreliable or not possible, a plain radiograph may be obtained.

Treatment

- The recommended first-line maintenance therapy for constipation is polyethylene glycol 3350 (PEG), starting at 0.4 g/kg/day, adjusted to clinical response, or lactulose (1–2 g/kg/day) if PEG is not available.
- Milk of magnesia, mineral oil and stimulant laxatives are optional additional or second-line therapies. See table on the next page for details of first and second line constipation drugs, doses and caveats.
- Continue maintenance therapy for at least 2 months, with resolution of symptoms for at least 1 month before stopping, and with a gradual taper. If a child is toilet training, this should be completed before stopping.
- For fecal impaction, PEG 3350 1–1.5 g/kg/day for 3–6 days is recommended. A daily enema for 3–6 days is recommended if PEG is not available.
- Normal fiber and normal fluid intake is recommended.
- Prebiotics and probiotics have not proven to be helpful.
- A 2–4 week trial of avoidance of cow's milk protein may be attempted for intractable constipation.

(continued)

When to refer

Refer for **emergent evaluation** if the child has severe abdominal distension or bilious emesis.

If the constipation is **intractable to interventions**, or if the child has one or more of the following, refer to pediatric gastroenterology (or indicated specialist):

- Failure to pass meconium in the first 48 hours of life
- Onset of constipation in infants < 1 month of age
- Family history of Hirschsprung's disease
- Ribbon stools
- Blood in stool without anal fissures
- Failure to thrive
- Fever
- Perianal fistula
- Abnormal position of anus (pediatric surgeon)
- Abnormal thyroid gland (pediatric endocrinology)

Referral process

Randall Children's Northwest Gastroenterology

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For possible admissions or to reach a different sub-specialist at Randall Children's Hospital, **call Legacy One Call Consult & Transfer: 1-800-500-9111**.

Additional Resources

Tabbers MM, et al. Evaluation and Treatment of Functional Constipation in Infants and Children: Evidence-Based Recommendations from ESPGHAN and NASPGHAN. *Journal of Pediatric Gastroenterology and Nutrition*. 2014 Feb;58(2):265–81. **http://www.naspghan.org/files/documents/pdfs/cme/jpgn/Evaluation_and_Treatment_of_Functional.24.pdf**

ORAL THERAPY	
Osmotic laxatives	
Polyethylene glycol (PEG) 1 cap = 17 grams = 3.5 teaspoons	0.2–0.8 g/kg/day — can be divided when given at higher doses
Lactulose 10 g/15 ml	1–2 g/kg once or divided bid
Milk of magnesia (magnesium hydroxide) Oral liquid 400 mg/5 ml Concentrated oral liquid 2400 mg/5 ml Chewable tablet 400 mg	2–5 yrs: 0.4–1.5 g/d daily or divided 6–11 yrs: 1.2–2.4 g/d daily or divided 12–18 yrs: 2.4–4.8 g/d daily or divided
Mineral oil**	1–18 yrs: 1–3 ml/kg/d daily or divided up to 90 ml/day
Stimulant laxatives	
Bisacodyl	3–10 yrs: 5 mg/day > 10 yrs: 5–10 mg/day
Senna	2–6 yrs: 2.5–5 mg HS or divided 6–12 yrs: 7.5–10 mg HS > 12 yrs: 15–20 mg/day
Sodium picosulfate	1 mo–4 yrs: 2.5–10 mg once/day 4–18 yrs: 2.5–20 mg once/day

RECTAL THERAPY	
Enemas	
Sodium phosphate enemas*	2–18 yrs: 2.5 ml/kg up to max 133 ml
Sodium docusate enemas	< 6 yrs: 60 ml > 6 yrs: 120 ml
Bisacodyl enemas	2–10 yrs: 5 mg once/day > 10 yrs: 5–10 mg once/day
Saline enemas	Infant: < 1 kg 5 ml Infant: > 1kg 10 ml Over 1 yr: 6 ml/kg once or twice/day
Mineral oil enemas	2–11 yrs: 30–60 ml once/day > 11 yrs: 60–150 ml once/day
Suppositories	
Glycerin suppository	Infants: ½ suppos prn < 6 yrs: 1 infant suppos prn > 6 yrs: 1 adult suppos prn
Biscodyl suppository	2–10 yrs: 5 mg suppos prn Over 10 yrs: 5–10 mg suppos prn

• According to national guidelines, polyethylene glycol (PEG) is the first-line treatment. Lactulose is recommended if PEG is not available and all other therapies are considered second-line treatments.

*The use of sodium phosphate enemas has been associated with poor outcomes, especially if used in excess of recommended doses OR in patients with renal impairment or delayed bowel emptying. They should:

– Not be used in children younger than 2 years of age

– Not be used more than once a day

– Not be used for more than three days

**Oral mineral oil should be avoided in young children and other children at risk for aspiration.

• Suppositories are only for occasional use and, unless specifically indicated, enemas should not be used for more than three days.

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RANDALL CHILDREN'S HOSPITAL
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