

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

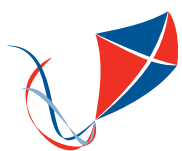
- A careful history and physical exam should be performed in order to evaluate for causes other than functional constipation. Alternate causes include:
 - Anatomic malformations
 - Botulism
 - Celiac disease
 - Cystic fibrosis
 - Diabetes mellitus
 - Dietary protein allergy
 - Drugs and toxins
 - Hirschsprung's 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)

Find this and other co-management/referral guidelines online at: www.legacyhealth.org/randallguidelines



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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

Northwest Pediatric Gastroenterology Phone: **503-276-6138** • Fax: **503-276-6148**

Steven Colson, M.D. Matthew Riley, M.D. Raghu Varier, D.O.
Kathryn Moyer, M.D. Melissa Sheiko, M.D. Emily Whitfield, M.D.

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.naspgan.org/files/documents/pdfs/cme/jpgn/Evaluation_and_Treatment_of_Functional.24.pdf

ORAL THERAPY		RECTAL THERAPY	
Osmotic laxatives		Enemas	
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	Sodium phosphate enemas*	2–18 yrs: 2.5 ml/kg up to max 133 ml
Lactulose 10 g/15 ml	1–2 g/kg once or divided bid	Sodium docusate enemas	< 6 yrs: 60 ml > 6 yrs: 120 ml
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	Bisacodyl enemas	2–10 yrs: 5 mg once/day > 10 yrs: 5–10 mg once/day
	6–11 yrs: 1.2–2.4 g/d daily or divided	Saline enemas	Infant: < 1 kg 5 ml Infant: > 1kg 10 ml Over 1 yr: 6 ml/kg once or twice/day
	12–18 yrs: 2.4–4.8 g/d daily or divided		Mineral oil enemas
Mineral oil**	1–18 yrs: 1–3 ml/kg/d daily or divided up to 90 ml/day	Suppositories	
Stimulant laxatives		Glycerin suppository	Infants: ½ suppos prn < 6 yrs: 1 infant suppos prn > 6 yrs: 1 adult suppos prn
Bisacodyl	3–10 yrs: 5 mg/day > 10 yrs: 5–10 mg/day	Bisacodyl suppository	2–10 yrs: 5 mg suppos prn Over 10 yrs: 5–10 mg suppos prn
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		

* 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.

Updated February 2017



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