Constipation & Fecal Impaction

Emergency Department

Nationwide Children's — When your child needs a hospital, everything matters.

Center for Clinical Excellence

Inclusion Criteria

- Age ≥12 months
- Patient meets criteria for constipation or constipation with fecal impaction or fecal impaction suspected on prior abdominal Xray

Exclusion Criteria

- Presence of Red Flags
- Hirschsprung's Disease, Cystic Fibrosis, IBD, Neurogenic bowel, Spinal dysraphism, anorectal malformation
- GI motility disorder
- Neutropenia or Oncology patients

Patient ≥ 12 months old with concerns for constipation with or without fecal impaction?

- History
- Physical exam including perianal exam
- Consider digital rectal exam *(medical chaperone required for patients > 10 years old)*

*Evaluate for **Red Flags** in history/exam*

Red Flags present?

Yes → **Off Pathway**: Discuss with Gastroenterologist

No

Impaction or fecal incontinence (soiling) present?

No → **Constipation Maintenance Therapy**

Yes

Family wants to pursue enema in ED after shared decision making?

If yes and in Urgent Care, transfer to ED

Yes → **Initial Enema Management of Fecal Impaction**

No → **Home Disimpaction Protocol**

Medium/large stool output? (Try both enemas prior to decision to admit)

Yes → **Home Disimpaction Protocol**

No

- Place PIV, start maintenance IVF
- Notify family that NG will be placed while inpatient for cleanout

Admit to Hospital Pediatrics unless patient meets criteria for GI service admission

Admit to GI service if:

- Ambulatory GI visit in last 2 years
- Scheduled GI visit

Follow-up with Primary Care Provider to review constipation action plan

Discharge Instructions

Constipation Maintenance Therapy

Diagnostic Criteria for Functional Constipation

Diagnostic Criteria for Fecal Impaction

Differential Diagnosis

Red Flags

History Red Flags

- Constipation in the first month of life
- Delayed passage of meconium (>48 hours)
- Family history of Hirschsprung Disease or celiac disease
- Ribbon/thin stools
- Blood in stools in the absence of anal fissures
- Failure to thrive, poor feeding
- Fever
- Bilious vomiting

Physical Exam Red Flags

- Abnormal thyroid gland
- Severe abdominal distension
- Abnormal perianal inspection
  - Perianal fistula or anal scar
  - Abnormal position of anus
  - Absent anal or cremasteric reflex
  - Gluteal cleft deviation
- Decreased lower extremity strength/tone/reflexes
- Tuft of hair on spine or sacral dimple
- Evidence of bowel obstruction

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Diagnostic Criteria for Functional Constipation

Per Rome IV criteria, patients must have 2 or more of the following at least once per week for a minimum of 1 month with insufficient criteria for irritable bowel syndrome:

- Two or fewer defecations in the toilet per week in a child of a developmental age of at least 4 years
- At least 1 episode of fecal incontinence per week
- History of retentive posturing or excessive volitional stool retention
- History of painful or hard bowel movements
- Presence of a large fecal ball in the rectum
- History of large diameter stools that can obstruct the toilet
- After an appropriate evaluation, the symptoms cannot be fully explained by another medical condition

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Diagnostic Criteria for Fecal Impaction

One or more of the following:

- A hard mass in the lower abdomen
- A dilated rectum filled with a large amount of stool on rectal examination
- Excessive stool in the distal colon on abdominal radiography

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Differential Diagnoses

Differential diagnosis of functional constipation

- Gastrointestinal
  - Celiac Disease
  - Milk Protein Allergy
  - Hirschsprung's Disease
  - Colonic Inertia
  - Anal Achalasia
  - Anatomic Malformations (Imperforate Anus, Anal Stenosis)
  - Pseudoobstruction
- Endocrine
  - Hypothyroidism,
  - Multiple Endocrine Neoplasia 2B
  - Diabetes Mellitus
  - Hypercalcemia, Hypokalemia
  - Vitamin D Intoxication
- Pulmonology
  - Cystic Fibrosis
- Neurologic
  - Spinal Cord Anomalies or Trauma
  - Tethered Cord
- Musculoskeletal
  - Abnormal abdominal musculature (e.g. prune belly syndrome, gastroschisis, Down Syndrome)
- Oncologic
  - Pelvic mass
- Other
  - Drugs
    - Opiates, anticholinergics
    - Antidepressants
    - Chemotherapy
    - Heavy metal ingestion (lead)
  - Botulism

Differential diagnosis of fecal impaction

- Constipation
- Inflammatory Bowel Disease
- Celiac Disease
- Overactive bladder/urinary incontinence
- Pelvic floor dysfunction/dyssynergia
- Intestinal Obstruction
- Appendicitis
- Gastroenteritis
- Ovarian Neoplasm
- Ruptured Ovarian Cyst
- Pelvic Mass
- Rectal bezoar or foreign body
- Colon neoplasm
- Pregnancy

Relevant co-morbid conditions:

- Hirschsprung's Disease, Cystic Fibrosis, IBD, Neurogenic bowel or bladder, Spinal dysraphism
- GI motility disorder or NCH motility patient
- Anorectal malformation or NCH CCPR patient
- Neutropenia or Oncology patients

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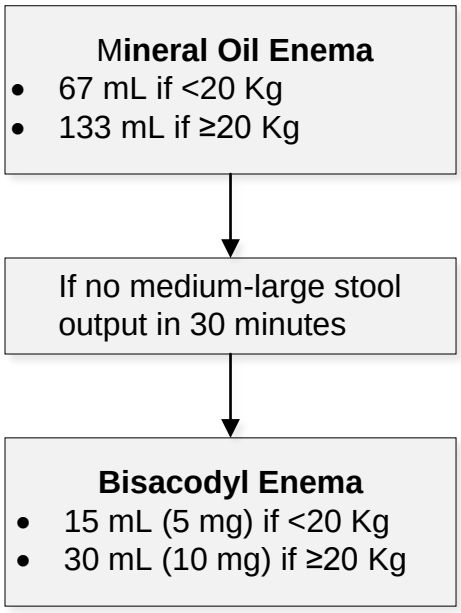
Emergency Department Enema Management of Fecal Impaction



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What to Tell Families

- **Include Constipation Discharge Instructions in discharge paperwork**
- The child should sit on the toilet two to three times daily, five to 10 minutes each time, for “protected time to have a bowel movement.”
- Ensure that smaller children have a footstool or other object so that they have a solid base to push off.
- Parents should use positive reinforcement, not punishment.
- Explain encopresis to the parent and child.
- Although the role of cow’s milk after age 1 is controversial, a trial of stopping milk for two to four weeks might be considered in children not responding to bowel therapy.
- Explain the importance of a balanced diet with five servings of fruits and vegetables per day and age-appropriate amounts of fluids.
- Set a follow-up appointment within several weeks to assess progress and provide encouragement and guidance. Encourage follow-up phone calls to remain on track.
- Do not stop medications without contacting your child’s provider.

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Home Disimpaction Protocols

Tips for Disimpaction

- For school-aged children, start bowel clean-out on Friday after school.
- If unsatisfactory results, repeat up to three days. Parents should call their provider if still not clear.
- Make sure the child is on a clear liquid diet for the duration of the clean-out; otherwise, the clean-out will take too long.

Disimpaction Protocols

Time of day	**Age 1-2** (15 to 22 pounds)	**Age 2-4** (22 to 44 pounds)	**Age 5-10** (45 to 88 pounds)	**Age 10+** (over 88 pounds)
Morning	Take 0.5 chocolate senna laxative square (7.5 mg)	Take 1 chocolate senna laxative square (15 mg)	Take 1.5 chocolate senna laxative squares (22.5 mg)	Take 2 chocolate senna laxative squares (30 mg)
Throughout the day	Mix 2.5 capfuls (42.5 g) of PEG3350 powder in 16 ounces of fluid Drink it all over 4-8 hours	Mix 4 capfuls (68 g) of PEG3350 powder in 20 ounces of fluid Drink it all over 4-8 hours	Mix 7 capfuls (119 g) of PEG3350 powder in 32 ounces of fluid Drink it all over 4-8 hours	Mix 14 capfuls (238 g) of PEG3350 powder in 64 ounces of fluid Drink it all over 4-8 hours
Evening	Take 0.5 more senna chocolate laxative square (7.5 mg)	Take 1 more senna chocolate laxative square (15 mg)	Take 1.5 more senna chocolate laxative squares (22.5 mg)	Take 2 more senna chocolate laxative squares (30 mg)

Keep on clear liquids the day of the clean-out.

Note: An enema may be needed to start if there is a large stool mass.
Bisacodyl is available over the counter but may be covered under insurance plans.
< 20 kg/44 lb: 5 mg or 15 mL Bisacodyl
> 20 kg/44 lb: 10 mg or 30 mL Bisacodyl

Maximum two enemas per clean-out. Can be given eight hours apart.

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Maintenance Therapy

Daily Maintenance Therapy

Tips:

- Daily maintenance therapy is a 3-pronged approach involving medications, behavioral modifications, and diet modifications
- If not improving despite following clean-out and maintenance recommendations, consider referral to pediatric GI.
- If stopping stimulant laxatives that have been given consistently, the dose needs to be slowly weaned off to prevent re-impaction.

Medications - Adjust until the patient is having daily oatmeal consistency bowel movements:

- Osmotic Laxatives (aka “smushers”)
  PEG 3350 (MiraLAX) 0.2-0.8 g/kg/day mixed with clear liquid. 1 capful (17g) should be mixed in 8 oz clear liquid. Adjust dose to ensure one to two soft bowel movements per day.

OR

- Lactulose (10 g packets or 10 g/15 mL syrup) 1-2 g (1.5-3 mL)/kg/day divided into one to two doses. Up to 60 mL per day for initial dose.

- Stimulant Laxatives (aka “pushers”) – Add only if osmotic laxatives are ineffective.

Behavioral Modifications:

- Toilet sitting 5-10 minutes after meals
- Ensure that smaller children have a footstool or other object so that they have a solid base to push off
- Use positive reinforcement, not punishment

Diet Modifications:

- Balanced diet: whole grains, and 5 servings of fruits and vegetables per day
- Fluids - Consider prune juice and age-appropriate water intake.
  Ages 1 to 2: Three to four cups of water per day
  Ages 2 to 4: Four cups of water per day
  Ages 5 to 10: Six cups of water per day
  Ages 10+: Eight cups of water per day
- Although the role of cow’s milk after age 1 is controversial, a trial of stopping milk for two to four weeks might be considered in children not responding to bowel therapy.

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References

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Quality Goals & Metrics

Goals

- Decrease abdominal radiography use to diagnose functional constipation in favor of evidence-based history and physical exam criteria.
- Decrease laboratory testing in the routine evaluation of functional constipation or fecal impaction.
- Standardize ED and inpatient:
  - Treatment of constipation and fecal impaction
  - Discharge education and instructions

Quality Metrics

Process

- ED LOS metrics among those with a chief complaint of constipation.
- ED LOS metrics among children admitted for a clinical impression of constipation or fecal impaction.

Outcome

- AXR rate for patients with a chief complaint of constipation.
- Decrease ED admission rate with primary diagnosis of constipation or fecal impaction.

Balancing

- ED/UC 72hr return rate for patient's discharged with home enema regimen with a chief complaint of constipation or abdominal pain.
- Shared Pathway Balancing Measure – Overall 24hr and 72hr return rate.

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Origination Date: *April, 2023*

Next Revision Date: *April, 2028*

Clinical Pathway Development

This clinical pathway was developed using the process described in the NCH Clinical Pathway Development Manual Version 6, 2022. Clinical Pathways at Nationwide Children's Hospital (NCH) are standards which provide general guidance to clinicians. Patient choice, clinician judgment, and other relevant factors in diagnosing and treating patients remain central to the selection of diagnostic tests and therapy. The ordering provider assumes all risks associates with care decisions. NCH assumes no responsibility for any adverse consequences, errors, or omissions that may arise from the use or reliance on these guidelines. NCH's clinical pathways are reviewed periodically for consistency with new evidence; however, new developments may not be represented, and NCH makes no guarantees, representations, or warranties with respect to the information provided in this clinical pathway.

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