

CT Children's CLASP Guideline

Constipation

INTRODUCTION

Constipation is a common pediatric diagnosis, affecting up to 30% of children and accounting for 3-5% of pediatric visits. Constipation can cause significant functional disability, disrupt patients and their families' social activities, and result in missed school time. Constipation is characterized by infrequent, hard stools that can be associated with fecal incontinence (voluntary or involuntary), abdominal pain, and difficult or painful evacuation. While constipation can be a clinical symptom of other underlying organic diseases, 95% of cases in healthy children aged one year and older are diagnosed as functional constipation, which is most prevalent in children aged 2-5 years old.

Functional constipation is a diagnosis of exclusion by ruling out other medical conditions and based off of developmental age using the Rome IV criteria (see [Appendix E: Rome IV Criteria](#)).

INITIAL EVALUATION – TARGETED CLINICAL HISTORY

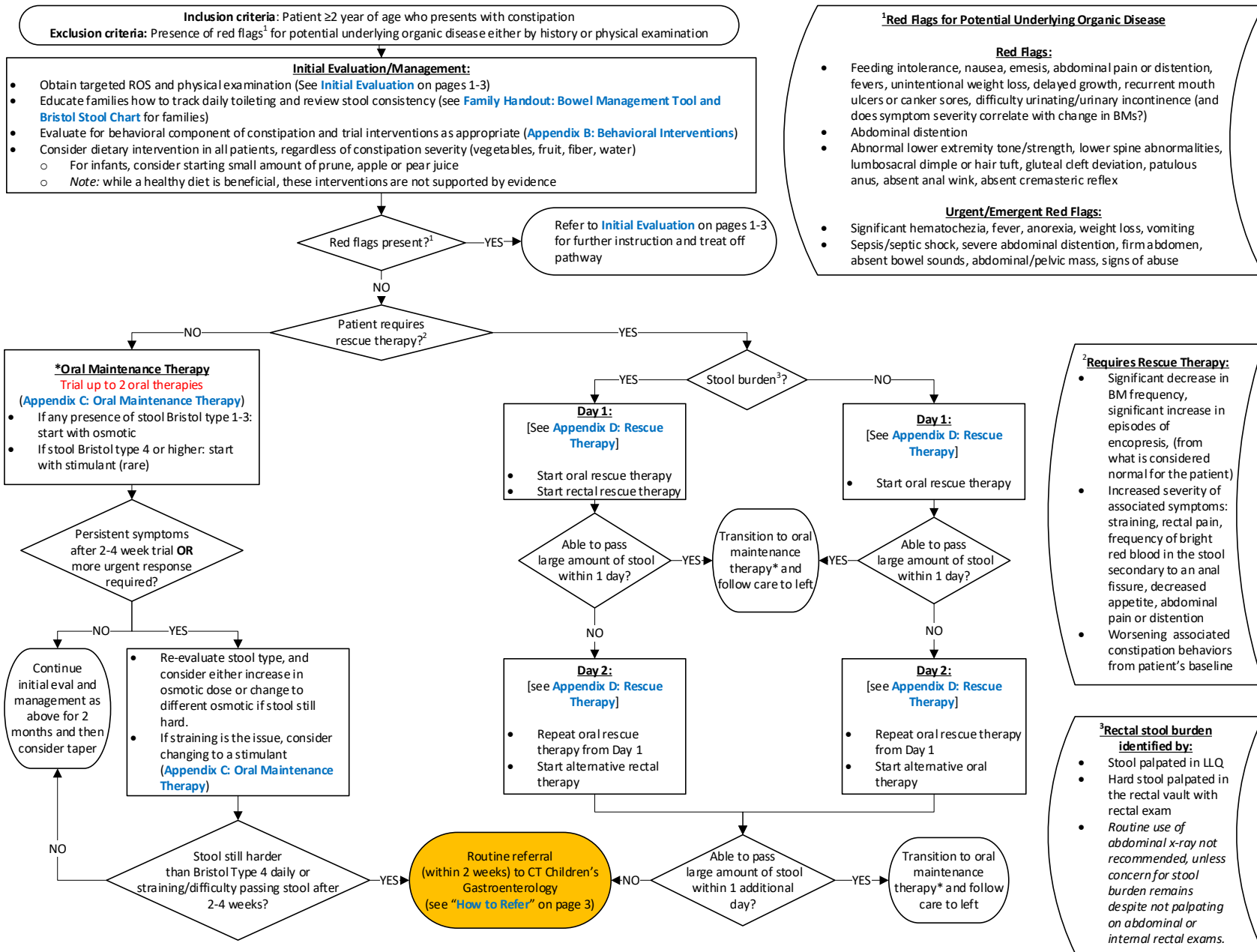
TARGETED CLINICAL HISTORY:

- **Past Medical History:**
 - Presence of medical diagnoses that may cause or contribute to constipation (neurological and spinal cord abnormalities, congenital anorectal malformations)?
 - Patient history suggestive of potential lead toxicity or abuse?
- **Timing of Onset:**
 - Any preceding change in diet/meds?
 - Did constipation start at initiation of toilet training?
 - Was child successfully toilet trained/no stooling accidents?
 - Any period of “normal” stools? (if so, note duration and stool characteristics)
- **Characteristics of bowel movements (BMs):**
 - Frequency, consistency (using [Family Handout: Bowel Management Tool and Bristol stool chart](#))
 - Presence of blood in the stool (including shade of color, amount, frequency of stools with blood); associated symptoms in the presence of blood (straining, rectal pain, hard stools)
 - **Note:** *small amounts of bright red blood associated with firm stools may be due to anal fissures found in functional constipation while large amounts of any red color associated with loose stool may be a sign of colitis*
 - Episodes of fecal incontinence (consistency and frequency of accidents)
- **Presence of Associated BM Symptoms/Behaviors:**
 - Difficulty or straining with passing stool, rectal pain with passing stool, urge to defecate
 - Sensation of incomplete evacuation (for older children who can understand this question)
 - Withholding behaviors or other behaviors (see [Appendix B: Behavioral Interventions](#))
 - **Note:** *The presence of with-holding behaviors and refusing to participate in the yet to be toilet trained child is a significant contributing factor to persistent constipation and associated behaviors*
- **Constipation Interventions Tried:**
 - Previous interventions & their effects on stool frequency and consistency
 - Patient refusal of medications (if so, which ones and why)
- **Dietary Intake:**
 - Review daily intake and amount of vegetables, fruit, fiber and water
 - **Note:** *While a healthy diet may be beneficial, the effects of these dietary interventions are not supported by a strong evidence base.*

	<ul style="list-style-type: none"> ▪ Family History: <ul style="list-style-type: none"> – Autoimmune diseases, including Celiac Disease or Inflammatory Bowel Disease – Multiple Endocrine Neoplasia (MEN) or associated neoplasms – <p>Refer to RED FLAGS section below for details and guidance on concerning findings</p>
<p>INITIAL EVALUATION – TARGETED PHYSICAL EXAMINATION</p>	<p>TARGETED PHYSICAL EXAM:</p> <ul style="list-style-type: none"> ▪ General: <ul style="list-style-type: none"> – Signs of sepsis, obesity ▪ HEENT: <ul style="list-style-type: none"> – Delayed closure of fontanelles (characteristics of and presence of delayed closure), canker sores, enlarged thyroid gland ▪ Abdominal: <ul style="list-style-type: none"> – Distention, absent bowel sounds, firmness, tenderness to palpation, presence of stool burden, abdominal or pelvic mass. <ul style="list-style-type: none"> ○ Note: <i>Stool is often palpated in the left lower quadrant in children. If unable to palpate in the abdomen, then an internal rectal exam can often confirm the presence of stool in the rectal vault).</i> ▪ Lower Back & Extremity: <ul style="list-style-type: none"> – Lower spine abnormalities, lumbosacral dimple, hair tuft, lipoma, gluteal cleft deviation, abnormal lower extremity tone and strength ▪ Rectal: <ul style="list-style-type: none"> – Anterior displacement of the anus, narrowing of anal canal, hypotonic anus, anal fissures, hemorrhoids, scars/signs of trauma, absent anal wink/cremasteric reflex, hard mass palpated in rectum (consistent with stool if impressionable on palpation or a small amount of feces is left on glove), explosive expulsion of stool with removal of finger after internal exam <ul style="list-style-type: none"> ○ Note: <i>Routine use of abdominal x-ray not recommended, unless concern for stool burden remains despite not palpating on abdominal or internal rectal exams.</i> <p>Refer to RED FLAGS section below for details and guidance on concerning findings</p>
<p>RED FLAGS</p>	<p>RED FLAGS of Potential Underlying Organic Disease: *If any red flags present, treat off pathway*</p> <ul style="list-style-type: none"> ▪ RED FLAGS in CLINICAL HISTORY: <ul style="list-style-type: none"> – Feeding intolerance, nausea, emesis, abdominal pain or distention, unintentional weight loss, delayed growth, recurrent mouth ulcers or canker sores, difficulty urinating/urinary incontinence <ul style="list-style-type: none"> ○ If above symptoms present, does symptom severity correlate with change in the BMs? ▪ RED FLAGS in PHYSICAL EXAM: signs of potential underlying organic disease: <ul style="list-style-type: none"> – Persistent abdominal distention, abnormal lower extremity tone and strength, lower spine abnormalities, lumbosacral dimple or hair tuft, gluteal cleft deviation, patulous anus, absent anal wink, or absent cremasteric reflex – Diagnostic Assessment: If concerns for neurologic impairment and patient is younger than 2 years, obtain lumbosacral ultrasound within 1 week to further evaluate for spinal cord anomalies. If abnormal, referral to CT Children’s Gastroenterology & Neurosurgery within 2 weeks. For other concerning exam findings, referral to CT Children’s Gastroenterology within 2 weeks.

	<p><u>URGENT/EMERGENT RED FLAGS:</u></p> <ul style="list-style-type: none"> – History of significant hematochezia, fever, anorexia, weight loss, or vomiting OR – Symptoms suggestive of sepsis/septic shock, severe abdominal distention, firm abdomen, absent bowel sounds, abdominal/ pelvic mass, signs of abuse <ul style="list-style-type: none"> ○ Call CT Children’s to discuss with on-call Gastroenterologist ○ If clinically unstable, refer child to Emergency Care
INITIAL PCP MANAGEMENT	<ul style="list-style-type: none"> ▪ See Appendix A: Constipation - Initial PCP Management ▪ If concerns for etiology of constipation other than functional constipation, could consider the following Diagnostic Assessment: <ul style="list-style-type: none"> ○ Labs including: TSH and free T4, Celiac screen (total IgA, TTG IgA, and Endomysial IgA), basic metabolic panel, lead level
WHEN TO REFER	<ul style="list-style-type: none"> ▪ Refer to Connecticut Children’s ED if: patient is clinically unstable ▪ Urgent GI Referral/Contact GI on call if: significant hematochezia, fever, anorexia, weight loss, vomiting, or significant abdominal distention ▪ Routine GI & Neurosurgery referral (will be seen within 2 weeks) if: concern for underlying neurologic organic disease ▪ Routine GI referral (will be seen within 2 weeks) if: initial PCP constipation management fails (see Appendix A: Constipation - Initial PCP Management)
HOW TO REFER	<p>Referral to Department of Digestive Diseases, Hepatology & Nutrition and/or Department of Neurosurgery via CT Children’s One Call Access Center Phone: 833.733.7669 Fax: 833.226.2329 For more information on how to place referrals to Connecticut Children’s, click here.</p> <p><i>Information to be included with the referral:</i></p> <ul style="list-style-type: none"> ▪ Notes from recent visits ▪ Growth charts (height, weight, BMI) ▪ Copies of relevant laboratory studies and imaging studies
WHAT TO EXPECT	<p>What to expect from CT Children’s Visit:</p> <ul style="list-style-type: none"> ▪ Comprehensive history and physical exam ▪ Review of systems ▪ Additional laboratory and imaging studies, as indicated

Appendix A: Constipation – Initial PCP Management



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Appendix B: Behavioral Interventions

Associated Behaviors of Constipation and Behavioral Interventions for the treatment of Pediatric Functional Constipation

Associated Behaviors of Constipation:

- Refusing to sit on the toilet or potty to pass a bowel movement
- Refusal to take medications
- Withholding behaviors: such as crossing legs, walking on tippy toes, crying, hiding, dancing or shaking, suddenly going into a different room or part of a room to pass a bowel movement
- Refusing to remove oneself from activities such as homework, games, or playing outside

Behavioral Interventions:

- Schedule toilet sitting for no longer than 10 minutes at a time, 5 minutes after a large meal
- Develop a rewards system for persistently overcoming fears (like sitting on the toilet) or passing a bowel movement in the toilet
- Positive reinforcement with effectively passing stool with a non-judgmental approach to setbacks
- Schedule toilet sitting in the presence of withholding behaviors
- Schedule toilet sitting 10 minutes into the onset of an activity

Appendix C: Oral Maintenance Therapy

UpToDate Reference

Trial two oral maintenance therapies in succession.

- If any presence of Bristol stool type 1-3: start with osmotic therapy
- If any presence of Bristol stool type 4 or higher: start with stimulant therapy (this is rare).
 - Long term use of low-dose stimulant is acceptable.

Medication & Preparations	Weight/Age Based	Dose & Frequency	Expected Onset of BM
OSMOTIC			
Fruit Juice (100% Prune, Apple, Pear)	Infant (weight-based)	0.5 once per month old (MAX of 4 ounces)	24-96 hours
Polethylene Glycol (MiraLax, GlycoLax) <ul style="list-style-type: none">17 gram per 1 cap packet mixed in 6-8 ounces of room temperature fluid; consumed in 15-20 min	Infant and Children age (weight-based)	0.4- 0.8 g/kg per day (MAX of 17 g per day = ~4 tsp)	24-96 hours
	Younger than 18 months	0.5- 1 teaspoon per day	
	18 months – 3 years old	2-3 teaspoons per day	
	3 years and older	2-4 teaspoons per day	
	Adult age	17 g per day = ~4 tsp	
Lactulose <ul style="list-style-type: none">10 mg/15 mL solution	Infant and Children age (weight-based)	1 mL/kg given once or twice per day (MAX of 60 mL total per day)	24-48 hours
	Adult age	15-30 mL once or twice per day (MAX of 60 mL total per day)	
Magnesium Hydroxide* (Milk of Magnesia) <ul style="list-style-type: none">80 mg/mL solution	1-11 years old (weight-based)	1-3 mL/kg per day (MAX of 60 mL total per day)	0.5-6 hours
	12 years and older	30-60 mL per day (MAX of 60 mL total per day)	
STIMULANT			
Senna (syrup, ExLax) <ul style="list-style-type: none">8.8 mg/5 mL8.6 mg/tab15 mg/chocolate square	1-2 years old	<ul style="list-style-type: none">1.25-2.5 mL once or twice daily0.25-0.5 square once per day	6-12 hours
	2-6 years old	<ul style="list-style-type: none">2.5-3.75 mL once or twice daily0.5-0.75 square once per day	
	6-12 years old	<ul style="list-style-type: none">5-7.5 mL once or twice daily1-2 tabs once or twice daily0.5-2 square(s) once per day	
	12 years and older	<ul style="list-style-type: none">5-15 mL once or twice daily2-3 tabs once or twice daily0.5-3 square(s) once per day	
Bisacodyl (Dulcolax) <ul style="list-style-type: none">5 mg tab	2-12 years old	<ul style="list-style-type: none">1-2 tablets once per day	6-10 hours
	12 years and older	<ul style="list-style-type: none">1-3 tablets once per day	

*If using a magnesium-based formula at baseline, using another magnesium-based medication is not recommended

Appendix D: Rescue Therapy - Oral & Rectal

Medication	Weight/Age Based	Dose & Frequency
ORAL OSMOTIC THERAPY <i>Use your preferred oral agent on days 1 & 2</i>		
Medication	Weight/Age Based	Dose & Frequency
Polyethylene Glycol <i>(MiraLax, GlycoLax)</i> <ul style="list-style-type: none"> 17 gram per 1 cap packet 	1 year and older	2 g/kg once per day (MAX 238 g once per day)
Magnesium Citrate * <ul style="list-style-type: none"> 1.745g/30 Ml 	6 years and older	4-6 mL/kg per day (MAX 300 mL once per day)
RECTAL THERAPY <i>Choose one.</i> <i>If not effective, consider alternate therapy on day 2.</i>		
Bisacodyl <i>(Dulcolax)</i> 10 mg suppositories	2-12 years old	0.5 suppository once per day
	12 years and older	1 suppository once per day
Glycerin <i>(glycerol)</i>	2-5 years old	1 pediatric suppository per day
	6 years and older	1 adult suppository per day
Fleet Enema <i>(sodium phosphate enema)</i> Pediatric enema (2.25 oz) Adult enema (4.5 oz)	2-4 years old	0.5 pediatric enema
	5-11 years old	1 pediatric enema
	12 years and older	1 adult enema

*If using a magnesium-based formula at baseline, using another magnesium-based medication is not recommended

Appendix E: Rome IV Criteria

Infants and toddlers up to 4 years old	Children with developmental age of at least 4 years
<p>At least two of the following present for at least once month:</p> <ul style="list-style-type: none">• Two or fewer defecations per week• History of excessive stool retention• History of painful or hard bowel movements• History of large-diameter stools• Presence of a large fecal mass in the rectum <p>In toilet-trained children, the following additional criteria may be used:</p> <ul style="list-style-type: none">• At least one episode/week of incontinence after the acquisition of toileting skills• History of large-diameter stools that may obstruct the toilet	<p>At least two of the following present at least once per week for at least one month*</p> <ul style="list-style-type: none">• Two or fewer defecations in the toilet per week• At least one 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 mass in the rectum• History of large-diameter stools that may obstruct the toilet• The symptoms cannot be fully explained by another medical condition