

Children’s Hospital and Health System, Inc.
Patient Care Treatment Guideline
CW Urgent Care

SUBJECT: Constipation

Treatment of Constipation in Urgent Care

	Infants < 6 months	Infant 6-12 months	12 months and older
Not impacted	<ul style="list-style-type: none"> Breastfed infants with normal growth pattern can have infrequent stools, reassurance may be appropriate if stools are soft but infrequent 0.5-1 ounce prune juice or pear juice daily as needed to soften stools PCP may consider trial of whey based formula or hydrolysate formula for 2 weeks, or hypoallergenic formula if still not improving 	<ul style="list-style-type: none"> Sorbitol containing fruit purees if infant has started on solids (pureed prunes) 2-3 ounce prune or pear juice daily Lactulose syrup 1-2 ml/kg/day given 1-2 times per day Milk of Magnesia 1-3 ml/kg/day divided once or twice daily 	<ul style="list-style-type: none"> Miralax 0.4-0.8 grams/kg/day (max 17 grams per day) in once daily dosing <ul style="list-style-type: none"> Miralax 17 gm = 1 capful = approximately 4 tsp Miralax should be mixed in clear liquid NOT food and ratio kept consistent: <ul style="list-style-type: none"> 4 tsp in 8 oz. 3 tsp in 6 oz. 2 tsp in 4 oz. 1 tsp in 2 oz. Alternate: Lactulose syrup 1-2 ml/kg/day given 1-2 times per day
Impacted	<ul style="list-style-type: none"> Glycerin suppository to clean out rectum or rectal stimulation with lubricated rectal thermometer (occasional/rare use of glycerin recommended due to irritation of rectal mucosa, also tolerance can develop) GI recommends against use of liquid glycerin suppository in infants < 6 months due to lack of literature regarding safety and efficacy. 	<ul style="list-style-type: none"> Glycerin suppository or liquid glycerin to clean out rectum or rectal stimulation with lubricated rectal thermometer (occasional/rare use recommend as tolerance can develop) Do not use liquid glycerin suppository 	<ul style="list-style-type: none"> Preferred: Miralax 1.5 grams/kg/day divided BID for 3 days, then switch to maintenance dose above <ul style="list-style-type: none"> Max 42.5 grams per dose BID (2 ½ capfuls per dose BID) Add stimulant laxative (Senna) on day 3 if no bowel movement <ul style="list-style-type: none"> 2-6 years old: 2.5 ml/day or ½ tablet 6-12 years old: 5 ml/day or 1 tablet > 12 years old: 10 ml/day or 2 tablets Dosing of Senna based on: <ul style="list-style-type: none"> Liquid (8.8 mg/5ml) Tablet (8.6 mg) Alternate: Consider for Fecal Impaction with significant pain, vomiting, or family desire for enema: <ul style="list-style-type: none"> < 2 years: liquid glycerin suppository or glycerin suppository 2-4 years: one half (33 ml) Pediatric Fleets enema 5-11 years: one (66 ml) Pediatric Fleets enema ≥ 12 years: one (133 ml) Adult Fleets enema

- Do NOT use enema if child is dehydrated, will not be as effective and will contribute to increased absorption/abdominal cramping.
- Do NOT repeat sodium phosphates (Fleet) enema without bowel movement in between doses; increased risk of toxicity and death exists in those patients that received more than 1 dose without a bowel movement in between doses.
- Do NOT use sodium phosphate (Fleet) enema in patients with severe renal impairment.
- Do NOT use Milk of Magnesia in infants/children with known kidney disease

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Purpose: To evaluate and initiate treatment of constipation.

Definitions:

Constipation is defined as difficulty in passing stools, commonly associated with excessive firmness of stools and a decrease in the frequency of defecation. Functional fecal retention (stool withholding) is the most common cause of childhood constipation and fecal soiling. It consists of repeated attempts to avoid defecation. Persistent delay of urge to stool results in dilation of the rectum, with a fecal mass that results in muscle fatigue and incompetence of the anal sphincter. Non retentive fecal soiling, if not due to anatomic problems, may be a manifestation of an emotional disturbance in a school-aged child. It can also be the result of delayed acquisition of toilet training skills.

Encopresis is defined fecal incontinence often due to repeated attempts to delay stooling in a child who is otherwise expected to have achieved bowel control.

Fecal impaction is defined as a large, firm stool ball in the rectum, typically due to longstanding constipation. It is diagnosed as either a hard mass palpated in the abdomen, a hard ball of stool in the rectum on rectal exam, or a large rectal mass of stool on abdominal x-ray (KUB).

Constipation and/or encopresis affects between 1 and 5% of the pediatric population. Constipation accounts for 3-5% of general pediatric outpatient visits. The peak incidence of constipation occurs between 2 to 4 years of age, at the onset of toilet training. Constipation is more common in boys than girls.

Etiology:

Excessive dairy intake, recent illness and change in routine are the most often encountered causes of constipation.

- Dysfunctional States
 - Developmental (parent or child)
 - Dietary
 - Introduction of solid foods or cow's milk
 - Dehydration or inadequate fluid intake
 - Excessive cheese or milk intake
 - Low fiber diet
 - Excessive fiber intake with inadequate fluids
 - Milk protein sensitivity
 - Formula intolerance in infants <6 months old with constipation
 - Insufficient breast milk intake in infants < 6 months with slow weight gain
 - Malnutrition
 - Situational
 - Initiation of toilet training
 - Toilet phobia or toileting refusal
 - School entry / school bathroom avoidance

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- Febrile or prolonged illness
- Surgery or bed rest
- Disruption of child's usual routine
- Excessive parental interventions (frequent rectal stimulation)
- Psychogenic
 - Autism, OCD, ADHD, ODD, Mood Disorder
 - Depression
 - Anorexia nervosa
- Constitutional
 - Genetic predisposition
 - Sedentary life style
- Altered Anatomy and Physiology
 - Structural
 - Anal stenosis
 - Imperforate anus (neonate)
 - Anterior displaced anus
 - Anal fissure, diaper dermatitis, anal dermatitis (including perianal strep)
 - Acquired inflammatory stricture
 - Abdominal pelvic mass
 - Motility Disorders
 - Hirschsprung's disease
 - Pseudo-obstruction
 - Enteric neuromuscular disorders
 - Colonic inertia (slow transit constipation)
 - Abnormal abdominal musculature
 - Abnormal innervations
 - Myelomeningocele
 - Spinal cord tumor or injury
 - Tethered cord
 - Hypotonia
 - Connective tissue disorder
- Metabolic or Endocrine Dysfunction
 - Hypothyroidism
 - Hypercalcemia
 - Celiac disease
 - Diabetes insipidus
 - Diabetes mellitus
- Drugs, including side effects of medication
- Heavy metal ingestion
- Lead poisoning

Differential Diagnoses

- Normal stooling pattern of infancy, worried parent

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- Dyschezia: Presents as infants 0-9 months as straining and crying, typically for about 10 minutes, with passage of soft stool. Thought to be due to young infant's inability to coordinate the voluntary and involuntary body movements necessary to expel stool. Reassure families this will improve as the baby gets older and develops these skills.
- Any of the constipating conditions (see etiology above)
 - Consider associated urinary problems; there is a significantly increased incidence of UTI in patients with constipation

Guideline

Subjective Data/History

How does the family define constipation?

- History of Stooling
- Age of onset of constipation
- Usual pattern of elimination
- Description of stools, amount, consistency, presence of blood
- Associated symptoms including: GERD, straining, abdominal or anal pain, urgency, diarrhea, urinary incontinence, withholding behaviors
- Duration of constipation
- Dietary intake
 - Food intake, emphasis on fiber
 - Fluid intake, emphasis on milk, caffeinated fluids and water
 - Dairy intake, emphasis on cheese
- Social History
 - Changes associated with onset of constipation
 - Toilet training history
- Previous Medical History
 - Febrile, viral illness, injury or surgery prior to onset of the constipation
 - Previous treatment and its effectiveness

Objective Data/Physical Exam

- If possible, assess growth chart to determine if weight gain over time has been appropriate. Slow weight gain or weight loss suggests organic etiology. In breastfed infants, slow weight gain may be an indication of insufficient breast milk intake.
- In infants and children with a history of constipation since birth, assess location of anus as well as muscle tone and lumbar spine for presence of signs of occult tethered cord
- A fecal mass is commonly found
- Evidence does not support the use of digital rectal examination to diagnosis functional constipation. May consider rectal examination to assess:
 - Location of anus
 - Amount and consistency of stool
 - Hemoccult of stool

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Diagnostic Studies

- Evidence does not support using an abdominal X-ray to diagnose functional constipation.
- May consider KUB:
 - If diagnosis is unclear after physical exam and history
 - To document degree of problem
 - If parents need to see the amount of stool

Red Flags

- Constipation starting before 1 month of age
- Meconium passed > 48 hours
- Family history of Hirschsprungs disease
- Ribbon stools
- Blood in stools without anal fissures
- Failure to thrive
- Fever
- Bilious vomiting
- Abnormal thyroid gland
- Severe abdominal distention
- Perianal fistula
- Abnormal position of anus
- Absent anal or cremasteric reflex
- Decreased lower extremity strength and tone or reflexes
- Sacral dimple or hair tuft
- Gluteal cleft deviation
- Extreme fear during anal inspection
- Anal scars

Treatment: See Chart: Treatment of Constipation in Urgent Care

Ultimately need to identify the etiology of the constipation in order to prevent further reoccurrences.

- Fecal impaction present, rectal clean out necessary:
 - Patients < 12 months: Treatment with glycerin suppository
 - Patients ≥ 12 months: Treatment of fecal impaction involves either a 3 day course of higher dose MiraLax or use of an enema.
 - Treatment orally with MiraLax is favored in most cases, with enemas reserved for patients with vomiting, severe pain, or family desire for enema for the child
 - MiraLax is typically prescribed at a high dose (1.5 grams/kg/day divided into two doses, max 42.5 grams per dose BID).
 - Advise parents to keep toilet training children in diapers or pulls ups during clean-out, older children need to have easy access to toilet during this time
 - Following a clean out, all patients should be placed on maintenance dose of stool softener (MiraLax preferred, lactulose alternate) which should be continued until follow up visit with PCP, and likely will be necessary for a number of months.
 - Any child who continues to have thick pasty fecal soiling of underwear after the

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- initial cleanout is assumed to have had an incomplete cleanout and continues to have fecal impactions. They need a repeat cleanout.
- If no fecal impaction is present, treatment varies based on patient age, but advise family to initiate recommended treatment and continue until follow up visit with primary care provider.
 - Maintenance of normal bowel function
 - Goal is soft, normal caliber, controllable bowel movements approximately once per day.
 - Child, especially with a history of constipation, will need to have normal caliber bowel movements for minimum of two months before weaning off the laxative.
 - There is no evidence that tolerance develops to osmotic or lubricant laxatives.

Education of Patient/Family

- If family is in the process of toilet training and child is having significant stool withholding behavior and fecal impaction, advise family to temporarily discontinue toilet training efforts, place child back in diapers or pull ups full-time until impaction is resolved and withholding behavior improves. Parents should discuss timing of re-initiating toilet training with their child's primary care doctor.
- Dietary changes to improve stooling and decrease length of laxative therapy
 - Eliminate cheese from diet for 1 month
 - Limit milk to 16 oz/day
 - Encourage fluid intake based on body weight
 - Evidence does not support the use of *extra* fluid intake (beyond maintenance) in the treatment of functional constipation.
 - Encourage foods rich in fiber (5 + age in years = total daily needs)
 - Increase water intake before increasing fiber.
 - Increase fiber slowly to avoid abdominal pain from gas.
 - Evidence does not support the use of fiber supplements in the treatment of functional constipation.
- Evidence does not support the use of pre- or probiotics in the treatment of childhood constipation
- Uniqueness of every child's bowel habits
- Review toileting techniques for younger, smaller children including comfortable seat, feet on the floor or stool, without fear of falling in or off toilet.
- Reward system for the child's cooperation
- Encourage normal physical activity
- Scheduled toileting 15 minutes after mealtime
- Reassure parents that constipation is generally not life threatening and resolving the problem may take months.

Follow-up

- Recheck by pediatrician within 1-2 weeks

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- May consider referral to CW Constipation Clinic for child with history of constipation.
- If the infant has NOT defecated normally since birth, refer to CW GI for further evaluation.

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This guideline is designed to serve as a reference for clinical practice and does not represent an exclusive course of treatment nor does it serve as a standard of medical care. Providers should apply their professional judgment to the management of individual patient conditions and circumstances. Children's Hospital and Health System (CHHS) does not make any representation with respect to any sort of industry recognized standard of care for the particular subject matter of this clinical guideline. Additionally, CHHS form documents are subject to change, revision, alteration, and/or revocation without notice.

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Treatment information also provided by Denise Kilway, DNP, RN, CPNP, Gastroenterology,

Children's Wisconsin (personal communication, November, 2021).

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