

# Constipation: Adult

## Gastrointestinal

### Clinical Decision Tools for RNs with Additional Authorized Practice [RN(AAP)s]

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## Background

Constipation is defined as difficult or infrequent passage of stool from the colon (Huether, 2019). Constipation differs between individuals and should be examined from the lens of what is normal for that particular client as it is not significant until it causes health risks (e.g., fecal impaction, abdominal distention) or impairs quality of life (Huether, 2019). Constipation can be categorized as primary or secondary (Huether, 2019; Włodarczyk, Waśniewska, Fichna, Dziki, Dziki, & Włodarczyk, 2021). Additional information regarding causes and pathophysiology of each type is delineated following the Immediate Consultation Requirements section.

## Immediate Consultation Requirements

The RN(AAP) should seek immediate consultation from a physician/NP when any of the following circumstances exist:

- age over 50 years with recent onset of symptoms;
- sudden or progressive change in bowel patterns, including frequency, stool consistency, stool volume, straining, bowel fullness, pain or blood in the stool;
- rectal bleeding (hematochezia);
- fever;
- unintended weight loss (>5% over 6-12 months);
- nocturnal symptoms;
- abnormal laboratory blood work (e.g., positive fecal occult blood test, anemia or iron deficiency);
- fecal impaction;
- family history of colorectal cancer in first-degree relative(s), inflammatory bowel disease, visceral myopathy or celiac disease;
- palpable abdominal or rectal mass, or irregular anal canal on exam; and/or

- symptoms refractory to conventional therapy and behaviour changes regardless of age (Alberta Health Services, 2020; Huether, 2019; Interprofessional Advisory Group [IPAG], personal communication, October 2, 2019; Thomas, 2019).

### Classification of Constipation

Primary	Secondary
<p>Normal transit (functional):</p> <ul style="list-style-type: none"> <li>• most common;</li> <li>• associated with hard stools or difficulty with defecation, but normal stool frequency; and</li> <li>• result of sedentary lifestyle, low-fibre diet, low fluid intake, or consistent suppression of urge to defecate.</li> </ul> <p>Delayed transit:</p> <ul style="list-style-type: none"> <li>• due to abnormal innervation of the bowel leading to a longer transit time of stool through the colon; and</li> <li>• associated with infrequent passing of stools, bloating, and abdominal discomfort.</li> </ul> <p>Pelvic floor dysfunction:</p> <ul style="list-style-type: none"> <li>• most common in older clients;</li> <li>• associated with decreased smooth muscle contraction or inability to relax muscles of defecation (e.g., anal sphincter); and</li> <li>• may be the result of rectal fissures or fistulas, strictures, or hemorrhoids.</li> </ul>	<p>Medications:</p> <ul style="list-style-type: none"> <li>• calcium carbonate or aluminum hydroxide antacids,</li> <li>• anticholinergics,</li> <li>• anticonvulsants (e.g., phenytoin),</li> <li>• anti-diarrheal agents,</li> <li>• antiemetics,</li> <li>• antihypertensives (e.g., calcium channel blockers),</li> <li>• antiparkinsonian agents (e.g., levodopa),</li> <li>• antipsychotics (e.g., quetiapine),</li> <li>• bile acid sequestrants,</li> <li>• bisphosphonates</li> <li>• NSAIDS</li> <li>• vinca alkaloids</li> <li>• iron,</li> <li>• bismuth, or</li> <li>• opioids.</li> </ul> <p>Neurogenic disorders:</p> <ul style="list-style-type: none"> <li>• stroke,</li> <li>• Parkinson disease,</li> <li>• spinal cord injury, or</li> <li>• multiple sclerosis.</li> </ul> <p>Chronic conditions:</p> <ul style="list-style-type: none"> <li>• endocrine or metabolic disorders (hypothyroidism, diabetes, obesity hypokalemia, hypercalcemia, hypocalcemia, hyperparathyroidism, or hypomagnesemia),</li> <li>• diverticular disease,</li> <li>• renal dysfunction,</li> <li>• irritable bowel syndrome, or</li> <li>• depression.</li> </ul>

(Huether, 2019; Włodarczyk et al., 2021)

## Predisposing and Risk Factors

Predisposing and risk factors for primary and secondary constipation may be influenced by:

- age > 65 years,
- low fiber diet,
- female (especially during pregnancy),
- lack of physical activity or prolonged immobilization,
- endocrine or neuromuscular disorder,
- history of constipation in childhood,
- history of abuse,
- depression or anxiety,
- family or personal history of colorectal cancer,
- use of medications that commonly cause constipation, or
- chronic laxative use (Thomas, 2019).

## Health History and Physical Exam

### Subjective Findings

The circumstances of the presenting complaint should be determined. These include:

- duration and progression of symptoms (longstanding and stable versus more recent onset and worsening);
- change in bowel pattern (including frequency, stool consistency, stool volume, straining, bowel fullness, pain, or blood in the stool);
- hard or lumpy stools;
- feeling of incomplete bowel evacuation after a bowel movement;
- use of manual manoeuvres to remove stool from the rectum (e.g., digital disimpaction);
- hemorrhoids;
- rectal pain, itching, or bleeding;
- low-fibre diet;
- low fluid diet;
- sedentary lifestyle or recent immobilization;
- chronic use of laxatives;
- use of medication(s) that commonly cause constipation (see chart above);
- presence of past medical conditions related to constipation (see chart above); and/or
- family history of colorectal cancer, colonic polyps, inflammatory bowel disease, or varicosities (Alberta Health Services, 2020; Huether, 2019; Thomas, 2019).

### Objective Findings

The physical assessment for primary and secondary constipation should focus on assessment of the abdomen and rectum (Larkin et al., 2018).

The abdominal examination may reveal:

- abdominal distension,
- palpable masses of stool in colon,
- tenderness, and/or
- increased or decreased bowel sounds (Larkin et al., 2018).

The rectal exam may reveal:

- scars, fistulas, fissures, or hemorrhoids;
- pelvic floor dysfunction. The RN(AAP) should observe the perineum at rest and while the client is bearing down. Normally, contraction of the abdominal muscles is accompanied by relaxation of the external anal sphincter and pelvic floor muscles and perineal descent. Absence of this finding may indicate pelvic floor dysfunction. Descent less than 1 centimetre may indicate inability to relax pelvic floor during defecation whereas descent more than 3.5 centimetres may indicate laxity of perineum, possibly from childbirth or years of excessive straining during defecation.
- changes in rectal tone, masses, strictures, or fecal impaction. A gaping or asymmetric anal sphincter may indicate trauma or neurologic disorder. Difficulty inserting (or inability to insert) finger into anal canal suggests elevated pressure or stricture; and/or
- tenderness of the posterior rectum may indicate spasm of the pelvic floor (Larkin et al., 2018; Wald, 2018).

## Differential Diagnosis

The following should be considered as part of the differential diagnosis:

- bowel tumour or other malignancy,
- fecal impaction,
- irritable bowel syndrome,
- hemorrhoids,
- anal or rectal fissure,
- drug-induced constipation,
- idiopathic slow transit,
- diverticular disease,
- intestinal bowel obstruction,
- ileus,
- underlying neurologic condition,
- underlying metabolic or endocrine condition, or
- pregnancy (Thomas, 2019).

## Making the Diagnosis

A diagnosis of chronic constipation can be made based on a thorough health history (including medication review) and physical examination (Alberta Health Services 2020; Huether, 2019; RxFiles Academic Detailing Program 2021; Thomas, 2019).

Chronic constipation includes the presence of at least 2 of these symptoms for at least 3 of the last 6 months:

- $\leq 3$  spontaneous bowel movements per week;
- stool form that is hard or lumpy for  $>25\%$  of defecations (Bristol Stool Scale 1-2);
- straining during  $>25\%$  of defecations;
- sensation of incomplete evacuation for  $>25\%$  of defecations;
- sensation of anorectal blockage for  $>25\%$  of defecations; or
- manual maneuvers needed to facilitate  $>25\%$  of defecations (Alberta Health Services, 2020; Rx Files Academic Detailing Program, 2021).

## Investigations and Diagnostic Tests

No investigations or diagnostic tests are necessary unless alarm signs or symptoms are present. Ordering of selected laboratory tests should be guided by the health history and physical examination (Alberta Health Services, 2020). Appropriate tests may include a complete blood count, glucose, creatinine, calcium, albumin, celiac screen, and thyroid stimulating hormone (Alberta Health Services, 2020). Serum ferritin and transferrin saturation should be ordered if iron deficiency is suspected (Alberta Health Services, 2020). Routine use of plain abdominal x-rays or barium enemas are not supported in primary care (AHS, 2016).

## Management and Interventions

### Goals of Treatment

The primary goals of immediate treatment are to identify and treat reversible causes of constipation; establish regular bowel function, keeping in mind that frequency will vary from client to client; consider secondary causes of constipation and refer for disease-specific intervention; and prevent and treat complications such as fecal impaction, hemorrhoids, anal fissures, rectal prolapse, fecal incontinence, and bowel obstruction (Alberta Health Services, 2020; Włodarczyk et al., 2021).

### Non-Pharmacological Interventions

The RN(AAP) should recommend, as appropriate, the following non-pharmacological options:

- Ensure hydration status is adequate; recommend 1.5 to 2 litres of fluids per day to enhance the effectiveness of fibre.

- Dietary fibre intake of 30 grams per day: bran, whole grains, fruits and vegetables, prune juice, stewed prunes and figs can be tried. Slowly increase fibre intake over several weeks to decrease adverse effects such as flatulence, abdominal bloating, or cramping.
- Encourage relaxation exercises for the pelvic floor and external anal sphincter muscles.
- Increase physical activity to 20 to 60 minutes three to five times per week.
- Recommend scheduled toileting after meals.
- Constipation related to pelvic floor dysfunction may be improved with biofeedback (Alberta Health Services, 2020; RxFiles Academic Detailing Program, 2021; Thomas, 2019).

## Pharmacological Interventions

The pharmacological interventions recommended for the treatment of constipation in the adult population are in accordance with the *RxFiles: Drug comparison charts* (RxFiles Academic Detailing Program, 2021), *Chronic Constipation Pathway Primer* (Alberta Health Services, 2020) and *Common Abdominal Complaints* (Thomas, 2019).

Some clients may respond to non-pharmacological interventions, while others may also require medications to relieve initial constipation. Most adults with chronic constipation eventually require a laxative to alleviate symptoms but they should be used for as short a time as possible. The only agents appropriate for long-term use are bulk-forming agents.

Docosate sodium (Colace), a stool softener frequently used for prevention of constipation, is not effective. Long-term use of stimulant laxatives (e.g., sennosides) and sodium biphosphate or sodium phosphate (Fleet) enemas should generally be avoided.

If a client needs urgent relief, use osmotic laxative agents. The RN(AAP) may add a stimulant laxative for severe constipation that is not responding to osmotic laxatives until establishment of regular bowel movements. The RN(AAP) should also recommend a bulk-forming agent, which must be taken with adequate fluids. If symptoms of difficult defecation are present, add a glycerin suppository rectally.

### Bulk Forming Laxatives

Bulk-forming agents work by increasing stool weight and consistency by increasing stool fluid content. These products must be taken with at least 250 milliliters of fluid to prevent fecal impaction or esophageal obstruction. They are most effective in clients with normal transit (functional) constipation. Onset of action is 12 to 72 hours and they are safe for long-term use.

	Drug	Dose	Route	Frequency	Duration
	Psyllium	3.4 - 6.8g (maximum 30 g/day)	p.o.	once daily to t.i.d.	7-14 days
OR	Inulin	3 – 6 g	p.o.	once daily to t.i.d.	7-14 days

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OR	Guar gum	1-3 tablets (maximum 15 tablets/day)	p.o.	once daily to five times/day	7-14 days
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### Osmotic Laxatives

Osmotic laxatives are poorly absorbed sugars that are broken down by colonic bacteria and work by drawing fluid in the colon and stimulating peristalsis. Add bulk-forming agents if required. Most beneficial in individuals with infrequent bowel movements.

	Drug	Dose	Route	Frequency	Duration
	Polyethylene glycol (PEG 3350)	17 g	p.o.	once daily prn (must drink at least 250 mL of fluid with each dose)	7-14 days
OR	Lactulose	15-30 mL (maximum 90 mL/day)	p.o.	once daily to t.i.d. prn	7-14 days
OR	Sorbitol 70% solution	15-30 mL (maximum 60 mL/day)	p.o.	once daily to b.i.d. prn	7-14 days
OR	Glycerin suppositories	1 adult suppository (2.65 g)	PR	once daily prn	7-14 days
OR	Magnesium hydroxide	30-60 mL (400 mg/5mL)	p.o.	at hs or divided up to t.i.d.	7-14 days

### Stimulant Laxatives

Stimulants work by altering colonic electrolyte transport, increasing fluids in the colon, and inducing peristalsis. Intended for use on a PRN basis only. Long-term laxative use can result in intermittent malabsorption, dehydration, fecal incontinence, and electrolyte imbalance.

	Drug	Dose	Route	Frequency	Duration
	Bisacodyl	5-10 mg (maximum 30 mg/day)	p.o.	qhs prn	7-14 days

	Drug	Dose	Route	Frequency	Duration
OR	Bisacodyl suppository	10 mg (maximum 30 mg/day)	p.r.	once daily prn	7-14 days
OR	Sennosides	17.2 (2 tablets) to 34.4 mg (4 tablets)	p.o.	qhs prn	7-14 days
OR	Sennosides suspension	10 to 15 mL	p.o.	qhs prn	7-14 days

## Client and Caregiver Education

The RN(AAP) provides client and caregiver education as follows:

- Counsel about appropriate use of medications (dose, frequency, compliance, etc.).
- Explain what constipation is and the ways of preventing it.
- Provide reassurance that bowel movement frequency every two to three days is considered within normal limits and variability between stool consistency is normal and expected.
- Provide reassurance that improvement in bowel function usually improves with simple interventions and most do not require extensive initial investigation.
- Reinforce the importance of passing stool when the urge presents, as ignoring the urge decreases the sensitivity to the sensation over time.
- Encourage establishing a bowel routine of toileting after meals when colonic activity has been stimulated to help develop a conditioned reflex for bowel action (early morning after breakfast is the best time).
- Avoid prolonged straining on the toilet.
- Avoid prolonged sitting.
- Encourage physical activity.
- Advise that bowel retraining may take months, and patience and persistence are required, and dietary changes must be maintained over the long term (Thomas, 2019).

## Monitoring and Follow-Up

The RN(AAP) should follow-up regularly every two to four weeks until regular bowel function is achieved. Bulk-forming agents should be maintained in the long term. When constipation is resolved, step-down therapy to the lowest level to maintain regular bowel function should be implemented (Thomas, 2019).

## Complications

The following complications may be associated with constipation in adults:

- chronic abdominal pain,
- hemorrhoids,



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- anal or rectal fissure,
- fecal impaction,
- fecal and urinary incontinence,
- urinary retention,
- inguinal hernia from straining, and
- intestinal obstruction (Thomas, 2019).

### Referral

Refer to a physician/NP if client presentation is consistent with those identified in the *Immediate Consultation Requirements* section; the constipation is not resolving with appropriate treatment; constipation is idiopathic or the client has a continued sensation of rectal fullness even when rectum is empty (IPAG, personal communication, October 2, 2019).

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