Provincial Perianal Disease Primary Care Clinical Pathway

Hemorrhoids / Anal Fissures

Quick Links: Primer & Expanded details | Provider resources | Patient pathway | Provide feedback

1a. History/Assessment
Perianal complaint, blood, pruritis, mass or pain

1b. Investigations
No exam is complete without **Digital Rectal Exam** (DRE)

Important considerations for colon cancer screening

2. Red Flags

- Mass on DRE
- Long-term foul-smelling discharge (***Fistula***)
- ***Suspected*** Crohn's disease

→ If unsure at any time, consider non-urgent advice

→ Refer to General Surgery (FAST)

- Infection/Chills/Unwell

→ Refer to on call doctor / ER / RAAPID

- ***Known*** Crohn's disease

→ Return to specialist on record

- Significant rectal bleeding
- Frequent bloody diarrhea

→ High Risk Rectal Bleeding Pathway
Chronic Diarrhea Pathway

No Red Flags and clear clinical picture

No Red Flags, but questions or uncertainty remain → Consider non-urgent advice

3. Consider medications and factors that contribute to constipation

Chronic Constipation Pathway (as needed)

4. Anal Fissure: Painful bleeding with BM and/or lump on skin near tear ("sentinel pile")

Trial **6 weeks** of conservative management. **Improved?**

- Yes → Continue conservative management
- No → Assess success with management plan. Increase intensity or trial alternate strategies for a second **6 weeks**. **Improved?**
  - Yes → Continue conservative management
  - No → **Refer** to General Surgery

5. Hemorrhoids: Bleeding with BM and/or intermittent protrusion

Multiple Skin Tags

Acute Thrombosed
Immediate Surgical Intervention is not usually indicated
(see expanded details).

After 48-72 hours from onset, symptoms from a thrombosed hemorrhoid will begin to resolve.

External / Internal (all grades)

Trial **6 weeks** of conservative management. **Improved?**

- Yes → Continue conservative management
- No → Assess success with management plan. Increase intensity or trial alternate strategies for a second **6 weeks**. **Improved?**
  - Yes → Continue conservative management
  - No → **Refer** based on hemorrhoid type:
    - **Internal Hemorrhoids**: Discuss the possibility of interventions (e.g., banding) and, if patient willing to consider, refer to general surgery. Otherwise continue conservative management.
    - **External Hemorrhoids**: Discuss the possibility of interventions (e.g., hemorrhoidectomy) and, if patient willing to consider, refer to general surgery. Otherwise continue conservative management.

Conservative Management (Anal Fissures and Hemorrhoids)

- Diet: High fiber and increase water intake
- Bowel habits, TONE
- Behaviour modification
- Hygiene practices (e.g., sitz baths)
- OTC: Topical ointments and creams (*not supported by evidence, no longer promoted, comfort measure only*)
- Prescription medications for hemorrhoids or fissures (*stronger clinical evidence*)
- Medications to treat constipation

This primary care pathway was co-designed provincially by Primary Care Providers, Specialist Physicians (General Surgery), Patient and Family Advisors, and the Alberta Health Services (AHS) Provincial Pathways Unit. It is intended to be used in conjunction with specialty advice services, when required, to support care within the medical home.

EXPANDED DETAILS

Pathway Primer

The perianal diseases addressed in this clinical pathway are all grades of hemorrhoids and anal fissures. These discrete conditions may relate to other disorders such as Crohn's disease. When the etiology of the perianal condition(s) relate to other root causes, referral to the appropriate specialty should be made early (see red flags).

The prevalence of hemorrhoids in the general population is difficult to estimate because many people will not seek medical treatment for minor complaints. However, self-reported evidence from the United States has shown that 4.4% of the population will experience a perianal complaint in their lifetime [1]. Despite low mortality rates associated with hemorrhoids and anal fissures, these two conditions can impact a patients' quality of life negatively [1].

The vast majority of patients presenting to primary care with perianal complaints can be managed within the medical home, with only approximately 10% of those referred to a specialist requiring surgical intervention [2]. It is important to note that surgical intervention for perianal disease is highly effective (95% success rate) but new perianal symptoms can develop if causative factors are not identified and modified.

Hemorrhoids: Peak prevalence of hemorrhoids occurs between 45 to 65 years of age with males and females equally affected. Hemorrhoids are classified as internal or external based on their position relative to the dentate line. Internal hemorrhoids, originate proximal to the dentate line, are painless and are assigned grades based on the degree of prolapse [3]:

- Grade I: bleeding without prolapse
- Grade II: prolapse with straining (Valsalva), spontaneous reduction
- Grade III: prolapse with straining, manual reduction needed
- Grade IV: chronically prolapsed, reduction impossible/ineffective

External hemorrhoids are located below the dentate line. External hemorrhoids are innervated by the somatic nerves which supply the skin in the perianal area which causes external hemorrhoids to be painful [1]. External hemorrhoids are caused by increased straining or intra-abdominal pressure and originate distal to the dentate line [3]. Thrombosed external hemorrhoids are extremely painful and present as a blueish lump in the perineal area [4].

Anal fissure: Linear tears of the skin of the anal canal that typically extend from the dentate line toward the anal verge [5] [6]. The lifetime incidence for anal fissures is approximately 11% [5]. Anal fissures can be either primary (caused by factors like constipation or diarrhea) or secondary (caused by other underlying conditions like inflammatory bowel diseases or sexually transmitted infections). Treatment with conservative management is effective for most patients with acute anal fissures (< 6 weeks) and in 40% of patients with chronic anal fissures (> 6 weeks) [5].

1a. History/Assessment

- Pain, burning, itching (duration and degree)
- Blood with defecation
    - Bright red vs dark red
    - On tissue or dripping vs mixed with stool
- Type and frequency of bowel movements
    - Change in bowel habits, regardless of type and frequency
- Poor toileting habits (e.g., excessive time spent sitting on the toilet, reading or on a cellular telephone)
- Family history of colorectal cancer
    - First degree relatives < 60 years old at time of diagnosis
- Previous endoscopy – when/why/findings?
- Unplanned weight loss

1b. Physical Exam and Investigations

- Positioning: prone, knees to chest or lateral decubitus position
- **Digital Rectal Exam (DRE)** – No exam is complete without a Digital Rectal Exam. If the patient refuses the DRE exam, make note of refusal in the referral. The *trauma-informed physical examinations and Sexually Transmitted and Blood Borne Infections (STBBI) testing: A guide for service providers* may be a helpful resource trauma-informed-exam-tool-e.pdf (cpha.ca). NOTE: If an anal fissure is clearly visible, consider the value of conducting a DRE as it may be very painful for the patient.
- Skin: lumps/masses, sphincter tone, lesions, skin tags versus sentinel pile
- Valsalva maneuver for suspected hemorrhoids or prolapse
- Hygiene

2. Red Flags

- Mass on Digital Rectal Exam: Suggestive of rectal cancer. Refer to General Surgery or Gastroenterology for consideration for urgent endoscopy. If pathology report confirms rectal cancer, refer to oncology.
- **Anal Fistulas (fistula-in-ano)**: A small tunnel that connects the anal canal or rectum to an opening on the skin around the anus. Most common in patients aged 30-50 years with men affected twice as often as women [7]. Assess for the presence of an anal fistula (history of abscess or abscesses, bloody/foul smelling discharge, fatigue, fever, chills). Overall condition/ stability of patient should determine emergent versus priority referral. The vast majority of anal fistulas require surgical intervention and should be referred.
    - **Concurrent management during referral process for anal fistulas**: NSAIDs (minimize narcotics as they may worsen constipation) and antibiotics (only if infection present) can be considered on a short-term basis while awaiting specialist appointment. Sitz baths should be recommended for cleanliness.
- Suspected Crohn's disease: Consider family history of Inflammatory Bowel Disease and assess for:
    - Multiple or lateral fissures or fistulas. Refer for endoscopy.
    - Frequent and bloody diarrhea: Fulsome history and consider following the Chronic Diarrhea Primary Care Pathway to assist in work up/ timing of referral.
- Infection: Generally unwell, fever or chills. Refer to on call doctor / ER or RAAPID: When a patient develops a general systemic infection that originates from a perianal infection, the condition is classified as a

complicated anorectal sepsis [8]. A high index of suspicion should be focused on the underlying conditions that are often associated with perianal fissures; most notably is the presence of undiagnosed Crohn's disease [8].

- Known Crohn's disease: Patients with a confirmed diagnosis of Crohn's disease will typically be followed by a gastroenterologist or general surgeon depending on local context and availability. Refer to Specialist on record.
- Significant rectal bleeding: Rectal pain and bleeding should never be automatically attributed to hemorrhoids or anal fissures [1]. Refer to the High Risk Rectal Bleeding Pathway.
- Frequent bloody diarrhea: Refer to the High Risk Rectal Bleeding Pathway and Chronic Diarrhea Primary Care Pathway.

IMPORTANT CONSIDERATIONS FOR COLON CANCER SCREENING

Patients with perianal disease may ALSO be due for colon cancer screening. *If eligible and not up to date, consider referring for endoscopy in addition to addressing perianal complaint (non-urgent consult). If not eligible, consider FIT test.*

Some considerations:

1. If there is outlet bleeding from hemorrhoids it is NOT the right time to do FIT testing – consider delaying until bleeding resolved.
2. FIT is not used to INVESTIGATE bleeding (refer to High Risk Rectal Bleeding Pathway to assist in decision making).
3. FIT testing should NOT be ordered for those with true family history (i.e., first degree relatives, < 60 years old). Refer to Colorectal Cancer Screening CPG (TOP).
4. Conservative management of perianal disease continues to be important while patients await their screening colonoscopy.
5. Red flags identified in this clinical pathway guide when an earlier referral for an endoscopy for INVESTIGATION may be required (this may also satisfy screening recommendations).

SPECIAL CONSIDERATIONS

There are certain populations and situations that may require additional consideration when presenting with perianal complaints.

1. Post-menopausal women: Itching around the vagina and rectum could be related to perianal disease or may be lichen sclerosis.
2. Pregnancy and post-partum: Hemorrhoids are common during pregnancy and childbirth and usually resolve post-partum. Surgery is contraindicated due to the risk of inducing labour. Provide reassurance and trial appropriate conservative management [9].
3. Anoreceptive intercourse: For patient who have engaged in anoreceptive intercourse, consider other causes for local symptoms (e.g., STIs). For anatomical/structural concerns (e.g., prolapse), refer to General Surgery.
4. Dermatology related concerns: Use of soaps or other chemicals and wearing thong underwear can cause friction and irritation on the perineum. Complete DRE to ensure that cause or complaint is perianal disease related before making referral to General Surgery.

Clinical Pearls:

- Provide reassurance: Challenging bowel function often improves with simple intervention [10].
- Maintenance of healthy behaviour changes is required to mitigate recurrent hemorrhoids and anal fissures.
- If patient is too uncomfortable or uneasy to proceed with physical exam, consider deferring exam until the next visit (3-4 weeks) and treat the condition presumptively [11].
- Reevaluate patient's lifestyle behaviors regularly to determine if perianal risk factors are occurring.
- As history dictates, repeat physical exam to ensure a red flag has not emerged.
- Surgery is typically the last resort after exhausting conservative management.

3. Medications associated with constipation

Consider medications that patient may be taking that may be contributing to constipation. Discuss with patient the advantage and disadvantages of the medication in question and where possible, offer alternative medications that do not cause constipation.

Table 1: Common medications to consider as secondary causes [10]

Class	Common Culprits
Antacids	calcium containing salts such as CaCO3 (Tums®)
Anticholinergics	antihistamines (diphenhydramine), antispasmodics (scopolamine), antidepressants (e.g. TCAs), oxybutynin, tolterodine
Anticonvulsants	phenytoin
Anti-diarrheal agents	loperamide, lomotil, bismuth subsalictylate (Pepto Bismol®)
Antiemetics	5-HT3 antagonists (e.g. Ondansetron), dimenhydrinate
Antihypertensives	calcium channel blockers
Antiparkinsonian agents	levodopa, carbidopa, amantadine, benztropine, triheyphenidyl
Antipsychotics	clozapine, quetiapine, olanzapine
Bile acid	sequestrants cholestyramine, colestipol
Bisphosphonates	zolendronic acid
Iron and calcium supplements	
NSAIDs	
Opioids	
Vinca alkaloids	vincristine

Refer to Chronic Constipation Pathway (ahs.ca) as needed.

4. Anal fissures

Management of Anal Fissures: Trial two consecutive 6 week periods of conservative management strategies. If no improvement after the first 6 weeks, increase intensity of treatment or trial alternate conservative management strategies. With a single anal fissure, if symptoms are still not improving, consider surgery. Discuss the possibility of surgical intervention with the patient and if patient is willing to consider, refer. If patient will decline surgery, continue with aggressive conservative management, monitor and adjust treatment plan as needed. This may include offering an alternate topical vasodilator or second line medical therapy.

Recurrent fissures: If the fissure improves after the two 6 week trials but the patient becomes symptomatic again after a period of time, reinitiate the pathway starting with the two 6 week trials of conservative management.

5. Hemorrhoids

Management of Internal Hemorrhoids (Grades I, II, III and IV): Trial two consecutive 6 week periods of conservative management. If no improvement after the first 6 weeks, increase intensity of treatment or trial alternate conservative management strategies. If there is still no improvement after the second 6 week period, discuss the possibility of interventions (e.g., banding) and, if patient willing to consider, refer. If patient will decline surgery, continue with aggressive conservative management, monitor and adjust treatment plan as needed.

Management of Acute Thrombosed External Hemorrhoids *(<48-72 hours after onset of pain):* Immediate surgical intervention is not usually indicated. Management during the acute stage (<48-72 hours from onset) is focused on comfort measures while the thrombosed hemorrhoid begins to organize and symptoms resolve [e.g., Sitz baths and oral pain medications-NSAIDs (minimize narcotics as they may worsen constipation)].

If pain is intolerable and surgery is to be considered, excision of a thrombosed hemorrhoid (hemorrhoidectomy) can provide immediate relief of the significant pain that accompanies a thrombosed hemorrhoid. Excision of the thrombosed hemorrhoid is far superior to incision and evacuation and hemorrhoids treated by excision have a lower risk of recurrence than with incision and evacuation [12]. After 48-72 hours, surgery is generally not beneficial as pain from the excision of the hemorrhoid would exceed pain from the hemorrhoid itself [1].

Management of External hemorrhoids and Thrombosed External Hemorrhoids >72 hours after onset of pain: Trial two consecutive 6 week periods of conservative management strategies with reassessment after the first 6 weeks. If no improvement after the first 6 weeks, increase intensity of treatment or trial alternate conservative management strategies. Discuss the possibility of surgical intervention with the patient and if patient is willing to consider, refer. If patient will decline surgery, continue with aggressive conservative management, monitor and adjust treatment plan as needed.

Spontaneous evacuation of thrombosed hemorrhoids: As presented on UpToDate [13], “Occasionally, a thrombosed hemorrhoid will evacuate spontaneously, leaving a small ulcer with residual clot at the anal opening. This will typically resolve on its own over a few weeks, although the patient may be left with a skin tag that rarely causes enough symptoms to warrant its removal. However, in those patients who have a skin tag large enough to cause skin irritation, itching, pain, or inability to keep proper hygiene, [referral to general surgery for] excision can be beneficial”.

Skin Tags: Multiple skin tags can be indicative of previous hemorrhoidal disease but can also be indicative of other disease processes (e.g., Crohn's disease). Remainder of history will be important to distinguish.

Conservative Management

Dietary modification, including adequate fluid intake and fiber consumption, and counseling regarding bowel habits should be the first line treatment for patients with hemorrhoids and anal fissures [12].

1. Diet
    a. It is recommended that adults consume 14g/1000 kcal of fiber per day. For adults, a gradual increase to 21-38g of fiber should be recommended [10].
        i. Insoluble fiber (e.g., wheat bran, skin of fruits, many raw vegetables) adds bulk to the stool [10].
        ii. Soluble fiber (e.g., psyllium, oats, barley, fruit and seeds) absorbs water in the digestive tract and thickens stool and promotes peristalsis. Soluble fiber intake should be cautioned for those at risk of a bowel obstruction or narrowing of the esophagus, stomach or intestine [10].
        iii. Fiber supplements are bulking agents that absorb water, thereby softening the stool [14].
    b. 6-8 glasses of water or other non-caffeinated and non-alcoholic beverages daily [14].
    c. It is critical to combine an increase in fiber intake with adequate fluid consumption.

2. Bowel habits [15]

Table 2: TONE

Poor toileting habits include excessive straining, prolonged defecation time, and frequent bowel movements. These three contributing factors can be mitigated through the mnemonic TONE.	
Three minutes of defecation time (limiting time spent on toilet to 3-5 minutes)	Endpoint Goals
Once-a-day defecation frequency	
No straining during defecation (and no mobile phone or reading while on toilet)	
Enough dietary fiber	Dietary approach for T-O-N

*First three components of TONE are possible only if the final step (E) is implemented.
**Adequate fiber and water intake has been shown to stop the progression of hemorrhoids, even at advanced stages.

3. Behaviour modification:
    a. Weight loss when indicated
    b. Increased physical activity (see Canadian 24-Hour Movement Guidelines)
4. Hygiene practices (e.g., sitz baths-see patient pathway for details, bidet)
5. Over-the-counter (OTC): Topical ointments and creams (see table below)
    - There is limited evidence to support the effectiveness of OTC creams and ointments. Anecdotally, they may help with symptom management. Still, OTC creams and ointments are accessible treatments, and many patients may have trialed them before seeking medical care for perianal concerns. Long term use of topical creams and ointments may cause sensitivity or allergic reactions and their use should, therefore, be limited [16] [12].
6. Prescription medications for hemorrhoids or fissures (see table below)
7. Medications to treat constipation (see table below)

Table 3: Medications to treat Hemorrhoids, Anal Fissures, and Constipation

	Hemorrhoids	**Anal Fissures**
Over-the-counter: Ointments and creams	1. Anusol 2. Anusol-Plus 3. Preparation-H	1. Proktis-M 2. Xylocaine jelly
Over-the-counter: Pills	1. Hemovel 2. Venixxa	
Over-the-counter: Other	1. Tucks wipes 2. Witch Hazel 3. Xylocaine jelly	
Prescription Ointments	1. Anusol-HC 2. Proctodan HC 3. Proctosedyl 4. Procto-foam (delivery format) foam-based hydrocortisone	1. Diltiazem 2% apply TID x 6 weeks (60 g) with one repeat (lower compliance as TID) 2. Nifedipine topical 0.3% 3. Nitropaste 0.2 - 0.4% apply BID x 6 weeks (60 g) with one repeat (might be difficult to source given recent shortages so consider an alternative). A common side effect of Nitropaste is headaches. As a result of limited availability and side effects, other treatment options should be trialed first.
Medications to treat constipation	Refer to Treatment Options (pharmacological) table in the Chronic Constipation Primary Care Pathway (albertahealthservices.ca)	

Advice Options

For emergency medical attention, Call RAAPID for on-call General Surgeon or 911.

Zone	Program	Online Request	Phone Number	Hours of operation	Anticipated Turnaround Time
Urgent Telephone					
All Zones	RAAPID	N/A	**North:** 1-800-282-9911 780-735-0811 **South:** 1-800-661-1700 403-944-4486	**7 days per week** 24 hours	1 hour
Non-Urgent Electronic					
Calgary, Edmonton, North, South	eReferral Netcare		N/A	**Mon - Fri**	5 business days
Non-Urgent Telephone					
Edmonton, North	ConnectMD	Online Request	1-844-633-2263	**Mon - Fri** 9am – 6pm*	2 business days
Calgary	Specialist Link	Online Request	403-910-2551	**Mon - Fri** 8am – 5pm*	1 hour

*There are some exceptions to non-urgent telephone program hours of operation and exclusion.
In addition to where specified in the clinical pathway algorithm, you can request non-urgent advice at any point when uncertain about medications, next steps in treatment, imaging, or resources available.

Referral Process

Referral pathways are guidelines to help referring providers know what information, labs and diagnostic imaging are required with their referral to a specialty. These pathways are co-designed with Primary and Specialty Care, AHS Operations, and patients to ensure the right amount of information is included throughout the referral process to triage the patient as quickly as possible. To ensure referring providers have referral information at their fingertips, referral pathways may link to clinical pathways when available. AHS manages referral pathways and extensive work is ongoing as part of the Alberta Surgical Initiative. If you have questions or want to know more about the referral pathway development process, please email access.ereferral@ahs.ca.

- **Urgent Referral** – Call surgeon on call via RAAPID or call 911.
- Follow the Provincial General Surgery Referral Pathway and use the Facilitated Access to Specialized Treatment (FAST) Adult General Surgery Referral Form.
- Alberta Referral Directory is also a helpful resource for all referral information.

BACKGROUND

About this pathway

- This pathway was developed in collaboration with Primary Care Providers, General Surgeons, Patient and Family Advisors, the Alberta Health Services (AHS) Provincial Pathways Unit, and other AHS departments (e.g., Strategic Clinical Networks).
- Condition-specific clinical pathways are intended to offer evidence-based guidance to support primary care providers in caring for patients with a range of clinical conditions.

Authors and conflict of interest declaration

The authors represent a multi-disciplinary team. Names of the content creators and their conflict-of-interest declarations are available on request by emailing AlbertaPathways@ahs.ca.

Pathway review process, timelines

Primary care pathways undergo scheduled review every two years, or earlier if there is a clinically significant change in knowledge or practice. The next scheduled review is July 2026. However, we welcome feedback at any time. Please send us your feedback here.

Copyright information

DISCLAIMER

This pathway represents evidence-based best practice but does not override the individual responsibility of healthcare professionals to make decisions appropriate to their patients using their own clinical judgment given their patients' specific clinical conditions, in consultation with patients/alternate decision makers. The pathway is not a substitute for clinical judgment or advice of a qualified healthcare professional. It is expected that all users will seek advice of other appropriately qualified and regulated healthcare providers with any issues transcending their specific knowledge, scope of regulated practice or professional competence.

PROVIDER RESOURCES

Canadian Society for Exercise Physiology (Canadian 24-Hour Movement Guidelines)	https://csepguidelines.ca/
Chronic Diarrhea Primary Care Pathway	www.albertahealthservices.ca/assets/about/scn/ahs-scn-dh-pathway-chronic-diarrhea.pdf
Chronic Constipation Primary Care Pathway	www.albertahealthservices.ca/assets/about/scn/ahs-scn-dh-pathway-chronic-constipation.pdf
DynaMed	www.dynamed.com
High Risk Rectal Bleeding Pathway for Colorectal Cancer (CRC) Diagnosis	www.albertahealthservices.ca/assets/about/scn/ahs-scn-cancer-high-risk-rectal-bleeding-pathway.pdf
Quality Referral Evolution (QuRE)	www.ahs.ca/qure
Towards Optimized Practice (TOP) Colorectal Cancer Screening Clinical Practice Guideline (Revised 2020)	https://actt.albertadoctors.org/media/zrwey5ui/colorectal-cancer-screening-guideline.pdf
Trauma-informed physical examinations and STBBI testing: A guide for service providers may be a helpful resource	www.cpha.ca/sites/default/files/uploads/resources/stbbi/trauma-informed-exam-tool-e.pdf
UpToDate	www.uptodate.com/login

PATIENT RESOURCES

Your Journey with Perianal Disease (Hemorrhoids and Anal Fissures) > A webpage and two PDF formats are available to allow for easy printing, download, or scanning a QR code with the patient's smart phone for more information at their convenience.	https://myhealth.alberta.ca/HealthTopics/perianal-disease-pathway/Documents/perianal-disease-pathway.pdf
Canadian Digestive Health Foundation: The Bristol Stool Chart	https://cdhf.ca/en/digestive-conditions/constipation/
Hemorrhoids: Which Treatment Should I Use? (MyHealth.Alberta.ca)	https://myhealth.alberta.ca/Health/Pages/conditions.aspx?hwid=aa66614
Hemorrhoids - Canadian Digestive Health Foundation (CDHF)	https://cdhf.ca/en/digestive-conditions/hemorroids/
Patient education-hemorrhoids (beyond the basics) - UpToDate	www.uptodate.com/contents/hemorrhoids-beyond-the-basics?topicRef=1382

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