

1. Diagnosis of Inflammatory Bowel Disease >

- Gastroenterologist identifies patient with IBD diagnosis

2. Gastroenterology clinic visit

- Screen for malnutrition
- Direct to appropriate nutrition care

[Canadian Nutrition Screening Tool \(www.ahs.ca/frm-21101.pdf\)](https://www.ahs.ca/frm-21101.pdf)

3. Complete Malnutrition Risk Screening Tool >

Triage based on Canadian Nutrition Screening Tool to identify patients at risk of malnutrition

- 3a. Nutrition Risk (NO)**—No intervention required at this time
- 3b. Nutrition Risk (YES)**—[Refer to a Registered Dietitian](#)

No

4. Assess for History of Strictureing or Obstructive Disease >

Yes

4a. [Reduce Insoluble Fiber \(roughage\)](#) >

3a. Nutrition Risk (NO)

Consider Inactive vs. Active Disease

Inactive disease/Remission (IBD)

5. [My IBD Diet: Self-Managed Tools](#) >

Direct patient to [ahs.ca/IBD#toolkit](https://ahs.ca/IBD#toolkit) for more information on the following resources:

- Patient pathway
- Nutrition resources
- Lifelong Health Management

Active Disease (Crohn's)

Ineffective

6. [Special Considerations](#) >

- [Bloating/gas](#)
- [Diarrhea](#) or [High Output Ostomy](#)
- [Constipation](#)

7. [Therapeutic Diets\\* - Consider as adjunct to medical therapy](#) >

The following therapeutic diets have been cited in the [American Gastroenterology Association's Practice Guideline for IBD Nutrition](#) to induce clinical and endoscopic remission in active Crohn's disease:

**A. Crohn's Disease Exclusion Diet (CDED)**

- Partial Enteral Nutrition and Modified Oral Diet

**B. Exclusive Enteral Nutrition\*\***

- 100% Liquid Diet

\*Therapeutic diets may increase risk of malnutrition and require guidance from a [Registered Dietitian](#)

\*\*To be considered in select Crohn's disease patients only

3b. Nutrition Risk - YES

[Refer to a Registered Dietitian](#)

Remission achieved

Malnutrition resolved

# Provincial Inflammatory Bowel Disease and Nutrition Pathway For Gastroenterologists

This primary care pathway was co-developed by primary and specialty care and includes input from multidisciplinary teams. It is intended to be used in conjunction with specialty advice services, when required, to support care within the medical home. Wide adoption of primary care pathways can facilitate timely, evidence-based support to physicians and their teams who care for patients with common low-risk gastrointestinal (GI) conditions and improve appropriate access to specialty care, when needed. To learn more about primary care pathways, check out this [short video](#) or [click here](#) to visit Primary Care Supports webpage at [Primary Care Supports | Alberta Health Services](#)

## INFLAMMATORY BOWEL DISEASE (IBD) AND NUTRITION PATHWAY PRIMER

- Inflammatory bowel disease (IBD) is identified by chronic and relapsing inflammation of different segments in the gastrointestinal tract. The course of the disease often involves periods of exacerbation and periods of remission. While the etiology of IBD is multifactorial and not clearly understood, nutrition plays a key role in both etiopathogenesis and clinical courses<sup>1</sup>.
- Until recently, a paucity of nutrition recommendations existed for adult IBD; this is largely due to a lack of large clinical trials. However, in March of 2024, the [American Gastroenterology Association published a Clinical Practice Update on Diet in IBD](#) recommending the Mediterranean diet (unless otherwise contraindicated) with concomitant reduction in ultra processed foods. The fiber-containing and antioxidant rich nutrients of the Mediterranean diet are thought to exert a positive influence on the intestinal microbiome.<sup>2</sup> Conversely, ultra processed foods and their saturated fats, excess salt, emulsifiers and food additives have been identified in their ability to adversely alter the intestinal microbiome, intestinal immunity, and mucosal barrier<sup>3</sup>.
- Diet recommendations in IBD may also depend on disease course. There is evidence to suggest diet as a first-line therapy for active pediatric Crohn's disease<sup>4</sup> and as an adjunct to therapy in adult Crohn's disease.<sup>3</sup>
- Regardless of IBD disease state, it is important to consider 75%<sup>5</sup> of patients self-impose dietary restrictions based on subjective intolerance and disease severity. These unsubstantiated restrictions increase the risk of nutrient deficiencies. As such, evidenced-based nutrition recommendations and patient education should be considered key determinants in overall IBD health.

## EXPANDED DETAILS

### 1. Diagnosis of Inflammatory Bowel Disease (IBD)

This pathway was developed to support Gastroenterologists in directing appropriate nutrition care for patients with a confirmed diagnosis of Inflammatory Bowel Disease.

### 2. Gastroenterology Clinic Visit

For individuals with IBD, screen for malnutrition prior to directing patient to appropriate nutrition care.

### 3. Complete Malnutrition Risk Screening Tool

- The reported prevalence of malnutrition in IBD ranges between 20 and 85%.<sup>6</sup>
- Malnutrition in IBD is a predictor of poor clinical outcomes including increased rates of infection, longer hospital stays, prolonged recovery after surgery, and higher healthcare costs.<sup>6</sup>
- While the gold standard for malnutrition assessment is a Registered-Dietitian-delivered Subjective Global Assessment, such resources are not feasible for self-managed patient pathways.



- A self-administered malnutrition screening tool validated in the IBD ambulatory population is the [Canadian Nutrition Screening Tool \(CNST\)](#). In an ambulatory IBD population, the CNST was shown to have a sensitivity and specificity of 77.2% and 75.5%, respectively.<sup>7</sup>
- Triage based on the CNST is as follows:
  - Two "YES" indicate nutrition risk.
  - Two "NO" answers or one "NO" and one "YES" indicate no nutrition risk.
    - **3a. Nutrition risk - YES**
    - **3b. Nutrition risk - NO**

#### 4. Assess for History of Stricturing or Obstructive Disease

Patients with IBD who have symptomatic intestinal strictures may not tolerate fibrous, plant-based foods (i.e., raw fruits and vegetables) due to their texture.<sup>3</sup> An emphasis on careful chewing and cooking and processing of fruits and vegetables to a soft, less fibrinous consistency may help patients with IBD who have concomitant intestinal strictures incorporate a wider variety of plant-based foods and fiber in their diets.

##### 4a. Reduce insoluble fiber (roughage).

For patients with a history of stricturing or obstructive disease, recommend limiting the following foods:

- Uncooked vegetables and fruit, especially those with skins, seeds and peels. Try cooking, blending or pureeing instead.
- Dried fruit, popcorn, whole nuts and seeds.
- Whole grains, steel cut oatmeal, brown or wild rice, or quinoa.
- Jerky, sausage or other processed meat with casings or skins.

#### 5. My IBD Diet: Self-Managed Tools

Direct patients to [ahs.ca/IBD](https://ahs.ca/IBD) where they will be able to access information to help them manage their IBD. Under the heading 'IBD Toolkit', this site will include:

- Patient Pathway
- Nutrition Resources
  - My IBD Diet: Eating to Lower Inflammation
  - My IBD Diet Plate
  - My IBD Diet: Restaurant Considerations (coming soon)
  - Video series on Ultra-Processed Foods (coming soon)
  - Nutrition App (coming soon)

#### 6. Special Considerations

The following information may be considered should symptoms persist despite following 'My IBD Diet' or as adjuncts to 'My IBD Diet'.

1. Gas and Bloating:
  - Keep a [food and symptom journal](#) to identify foods or drinks that may trigger your symptoms.
  - Try to avoid swallowing air. Do not drink from a straw, gulp your food, or chew gum.
  - There may be medications that can help. Talk to your healthcare provider.
2. [Diarrhea](#) or [high output ostomy](#)
  - Reduce intake of [insoluble fiber](#) and high sugar food and drinks.
  - Increase intake of [soluble fiber](#) and trial an [oral rehydration solution](#).
  - If patient has an ostomy, consider [high output ostomy](#) resource.
3. [Constipation](#)
  - Increase dietary intake of fiber, fluid and activity.



## 7. Therapeutic Diets for Active Crohn's Disease

The etiopathogenesis of IBD involves impaired intestinal barrier function and altered composition and function of the intestinal microbiome.<sup>8</sup> A Western diet high in saturated fat, sugar and ultra processed foods contributes to intestinal microbiome dysbiosis and has been implicated in the pathogenesis of IBD.<sup>9</sup> Although less studied, diet has also been implicated in disease progression.<sup>10</sup>

Therapeutic diets exist for IBD, and while each one is unique in its approach, all have certain underlying principles in common as they seek to eliminate nutrients connected to dysbiosis.

Recently, the American Gastroenterology Association cited both Exclusive Enteral Nutrition (EEN) and the Crohn's Disease Exclusion Diet (CDED) with partial enteral nutrition (PEN) as adjuncts to therapy in active Crohn's disease.<sup>3</sup> Exclusive Enteral Nutrition (EEN) has been established as an effective first-line therapy in pediatric Crohn's disease.<sup>4</sup> And while the evidence for EEN in adult IBD is less clear,<sup>11</sup> it is supported by pediatric data. A major limitation of EEN use in adults is the relatively higher non-compliance rate, especially in longer durations of therapy due to taste fatigue and social incompatibility.<sup>12</sup> An additional barrier to EEN is the lack of dietetic support<sup>13</sup> and as such, a referral to a [Registered Dietitian](#) is required.

EEN can be considered for short duration (6-8 weeks)<sup>14</sup> in select adult Crohn's patients such as those who:

- are presurgical and malnourished<sup>15,16</sup>
- have complicated disease such as enterocutaneous fistulate and/or inflammatory strictures<sup>17,18,19</sup>
- require corticosteroid avoidance
- are refusing medications
- are highly motivated and conscientious

There are often costs associated with EEN liquid formulas. In Alberta, several [programs](#) exist to provide liquid formula funding. Furthermore, patients may be directed to do the following:

- Talk to your insurance provider – find out if you have benefits or insurance that will cover the cost of nutrition supplements with a doctor's prescription.
- Look for sale prices and coupons – check flyers or advertisements; some companies provide online coupons. Stores may have in-store coupons.
- Check to see if other brands are available – store or generic brands may cost less than brand names.

As there are inherent risks to undertaking any therapeutic diet, and nutrition recommendations in IBD should be highly individualized, a referral to a [Registered Dietitian](#) is required.<sup>3</sup>

## PROVIDER RESOURCES

### Advice Options

Non-urgent advice for gastroenterology is available to support family physicians.

- Electronic advice is available across the province via [Alberta Netcare eReferral](#). Advice requests can also be submitted online via [Specialist Link](#) (Calgary Zone), and [ConnectMD](#) (Edmonton & North Zones). Visit their webpages for more information.
- Non-urgent telephone advice connects family physicians and specialists in real time via a tele-advice line. Family physicians can request non-urgent advice from a gastroenterologist.
  - Calgary Zone: Submit request via [Specialist Link](#) or call 403-910-2551.
  - Edmonton and North Zones: Submit request via [ConnectMD](#) or calling 1-844-633-2263.



## PROVIDER RESOURCES

Description	Website
Refer to a Registered Dietitian	<ul style="list-style-type: none"> <li>Visit <a href="#">Alberta Referral Directory</a> and search for nutrition counselling.</li> <li>To learn more about programs and services offered by zone, visit <a href="https://ahs.ca/Nutrition">ahs.ca/Nutrition</a>.</li> </ul>
Crohn's and Colitis Canada	<a href="http://www.crohnsandcolitis.ca">www.crohnsandcolitis.ca</a>
GI Society - Canadian Society of Intestinal Research	<a href="http://www.badgut.org">www.badgut.org</a>
Canadian Digestive Health Foundation	<a href="http://www.cdhf.ca">www.cdhf.ca</a>
Nutritional Therapy for IBD	<a href="http://www.nutritionaltherapyforibd.org">www.nutritionaltherapyforibd.org</a>

## PATIENT RESOURCES

Description	Website
Alberta Health Services Resources <ul style="list-style-type: none"> <li>IBD Toolkit</li> <li>Patient Pathways</li> <li>Nutrition Resources</li> <li>Nutrition Education Materials</li> <li>Nutrition Workshops and Classes</li> </ul>	<ul style="list-style-type: none"> <li><a href="https://ahs.ca/IBD">ahs.ca/IBD</a></li> <li><a href="https://ahs.ca/NutritionHandouts">ahs.ca/NutritionHandouts</a></li> <li><a href="https://ahs.ca/NutritionWorkshops">ahs.ca/NutritionWorkshops</a></li> </ul>
Ask a dietitian a nutrition question	<ul style="list-style-type: none"> <li>Complete a self-referral at <a href="https://ahs.ca/811">ahs.ca/811</a> or call 811 and ask to talk to a dietitian.</li> </ul>
My Health Alberta resources <ul style="list-style-type: none"> <li>Lifelong Health Management (Eating Well)</li> <li>Diet for IBD</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Inflammatory Bowel Disease (IBD): Lifelong Health Management (alberta.ca)</a></li> <li><a href="#">Diet for Inflammatory Bowel Disease: Care Instructions</a></li> </ul>
Resources from Crohn's and Colitis Canada	<ul style="list-style-type: none"> <li><a href="#">Information and Resource Hub: Support For You</a></li> </ul>



## BACKGROUND

### About this pathway

- Digestive health primary care pathways were originally developed in 2015 as part of the Calgary Zone's Specialist LINK initiative. They were co-developed by the Department of Gastroenterology and the Calgary Zone's specialty integration group, which includes medical leadership and staff from Calgary and area Primary Care Networks, the Department of Family Medicine and Alberta Health Services.
- The pathways were intended to provide evidence-based guidance to support primary care providers in caring for patients with common digestive health conditions within the medical home.
- Based on the successful adoption of the primary care pathways within the Calgary Zone, and their impact on timely access to quality care, in 2017 the Digestive Health Strategic Clinical Network (DHSCN) led an initiative to validate the applicability of the pathways for Alberta and to spread availability and foster adoption of the pathways across the province.

### Authors and conflict of interest declaration

- This pathway was reviewed and revised under the auspices of DHSCN in 2024, by a multi-disciplinary team. Names of participating reviewers and their conflict of interest declarations are available on request.

### Pathway review process, timelines

- Primary care pathways undergo scheduled review every two to three years, or earlier if there is a clinically significant change in knowledge or practice. The next scheduled review is 2027. However, we welcome feedback at any time. Please email comments to [Digestivehealth.SCN@ahs.ca](mailto:Digestivehealth.SCN@ahs.ca) or [AlbertaPathways@ahs.ca](mailto:AlbertaPathways@ahs.ca).

### Copyright information

- This work is licensed under a Creative Commons Attribution-Non-commercial-Share Alike 4.0 International license. You are free to copy, distribute and adapt the work for non-commercial purposes, as long as you attribute the work to Alberta Health Services and Primary Care Networks and abide by the other license terms. If you alter, transform, or build upon this work, you may distribute the resulting work only under the same, similar, or compatible license. The license does not apply to content for which the Alberta Health Services is not the copyright owner.



© 2024 Alberta Health Services



References
1. Bischoff SC, Escher J, Hébuterne X, Kłęk S, Krznaric Z, Schneider S, Shamir R, Stadelova K, Wierdsma N, Wiskin AE, Forbes A. ESPEN practical guideline: Clinical Nutrition in inflammatory bowel disease. <i>Clin Nutr.</i> 2020;39:632–653.
2. Natasha Haskey, Mehrbod Estaki, Jiayu Ye, Rachel K Shim, Sunny Singh, Levinus A Dieleman, Kevan Jacobson, Deanna L Gibson, A Mediterranean Diet Pattern Improves Intestinal Inflammation Concomitant with Reshaping of the Bacteriome in Ulcerative Colitis: A Randomised Controlled Trial, <i>Journal of Crohn's and Colitis.</i> 2023;17(10):1569–1578.
3. Hashash JG, Elkins J, Lewis JD, Binion DG. AGA Clinical Practice Update on Diet and Nutritional Therapies in Patients With Inflammatory Bowel Disease: Expert Review. <i>Gastroenterology.</i> 2024 Mar;166(3):521-532. Doi: 10.1053/j.gastro.2023.11.303. Epub 2024 Jan 23. PMID: 38276922.
4. F.M. Ruemmele, G. Veres, K.L. Kolho, A. Griffiths, A. Levine, J.C. Escher, J. Amil Dias, A. Barabino, C.P. Braegger, J. Bronsky, S. Buderus, J. Martín-de-Carpi, L. De Ridder, U.L. Fagerberg, J.P. Hugot, J. Kierkus, S. Kolacek, S. Koletzko, P. Lionetti, E. Miele, V.M. Navas López, A. Paerregaard, R.K. Russell, D.E. Serban, R. Shaoul, P. Van Rheenen, G. Veereman, B. Weiss, D. Wilson, A. Dignass, A. Eliakim, H. Winter, D. Turner, Consensus guidelines of ECCO/ESPGHAN on the medical management of pediatric Crohn's disease, <i>Journal of Crohn's and Colitis.</i> 2014;8(10):1179–1207.
5. Godala M, Gaszyńska E, Durko Ł, Małacka-Wojcieszko E. Dietary Behaviors and Beliefs in Patients with Inflammatory Bowel Disease. <i>J Clin Med.</i> 2023 May 14;12(10):3455
6. Balestrieri P, Ribolsi M, Guarino MPL, Emerenziani S, Altomare A, Cicala M. Nutritional Aspects in Inflammatory Bowel Diseases. <i>Nutrients.</i> 2020;12(2):372.
7. Taylor LM, Eslamparast T, Farhat K, Kroeker K, Halloran B, Shommu N, Kumar A, Fitzgerald Q, Gramlich L, Abalde JG, Tandon P, Raman M. Using Patient Completed Screening Tools to Predict Risk of Malnutrition in Patients With Inflammatory Bowel Disease. <i>Crohns Colitis</i> 360. 2021 Jul 7;3(3):otab055.
8. Levine A., Sigall Boneh R., Wine E. Evolving role of diet in the pathogenesis and treatment of inflammatory bowel diseases. <i>Gut.</i> 2018;67:1726–1738.
9. Lee D, Albenberg L, Compher C, et al. Diet in the pathogenesis and treatment of inflammatory bowel diseases. <i>Gastroenterology.</i> 2015;148:1087–106.
10. Lees CW, Gros B, Kyle JA, Plevris N, Derikx L, Constantine-Cooke N, Jones GR, Jenkinson P, Siakavellas SI, Murphy L, Kennedy NA. 477c Habitual meat intake is associated with increased risk of disease flare in ulcerative colitis: INITIAL RESULTS FROM THE PREDICCT STUDY. <i>Gastroenterology.</i> 2023;164(6):S-1571.
11. Narula N, Dhillon A, Zhang D, Sherlock ME, Tondeur M, Zachos M. Enteral nutritional therapy for induction of remission in Crohn's disease. <i>Cochrane Database Syst Rev.</i> 2018;4(4):CD000542.
12. Mitrev N, Huang H, Hannah B, Kariyawasam V. Review of exclusive enteral therapy in adult Crohn's disease. <i>BMJ Open Gastro.</i> 2021;8:e000745.
13. Navas-López VM, Martín-de-carpi J, Segarra O, et al. PRESENT; PREScripton of Enteral Nutrition in pediatric Crohn's disease in Spain. <i>Nutr Hosp.</i> 2014;29(3):537–546.
14. Day A, Wood J, Melton S, Bryant RV. Exclusive enteral nutrition: An optimal care pathway for use in adult patients with active Crohn's disease. <i>JGH Open.</i> 2019;4(2):260-266.



15. Heerasing N, Thompson B, Hendy P et al. Exclusive enteral nutrition provides an effective bridge to safer interval elective surgery for adults with Crohn's disease. <i>Aliment. Pharmacol. Ther.</i> 2017;45:660-9.
16. Guo Z, Guo D, Gong J et al. Preoperative nutritional therapy reduces the risk of anastomotic leakage in patients with Crohn's disease requiring resections. <i>Gastroenterol. Res. Pract.</i> 2016;2016:501785.
17. Hu D, Ren J, Wang G et al. Exclusive enteral nutritional therapy canrelieve inflammatory bowel stricture in Crohn's disease. <i>J. Clin.Gastroenterol.</i> 2014;48:790–5.
18. Yan D, RenJ, Wang G, Liu S, Li J. Predictors of response to enteral nutrition in abdominal enterocutaneous fistula patients with Crohn's disease. <i>Eur. J. Clin. Nutr.</i> 2014;68:959-63.
19. Yan Q, Gao X, Chen H et al. Efficacy of exclusive enteral nutrition in complicated Crohn's disease. <i>Scand J. Gastroenterol.</i> 2017;52:995-1001.

