

OBJECTIVE

Alberta clinicians understand how to investigate and treat gastroesophageal reflux disease (GERD) and know when to refer patients for endoscopy.

TARGET POPULATION

Adults 18 years of age and older, pregnant women

EXCLUSIONS

Children under 18 years of age

RECOMMENDATIONS

INVESTIGATION

- ✓ Primarily diagnosed based on a history. Investigations normally not required.
- ✓ Refer to endoscopist for prompt investigation for patients with alarm features (see [alarm features](#)).
- X DO NOT order barium swallow for patients with alarm features unless there is limited access to gastroscopy

Alarm Features for GERD	
<ul style="list-style-type: none"> • Dysphagia (solid food, progressive) • Odynophagia (painful swallowing) • Bleeding/anemia 	<ul style="list-style-type: none"> • Weight loss • Persistent vomiting
Other Indications for Further Investigation	
<ul style="list-style-type: none"> • GERD symptoms that could be cardiac in origin • Respiratory symptoms secondary to reflux • Consider if failure to respond to treatment (note some patients may take 16 weeks to respond) 	

Table 1: Alarm Features for GERD and Other Indications for Further Investigation

MANAGEMENT OF UNCOMPLICATED GERD

(See [Algorithm](#))

- ✓ Encourage smoking cessation, avoiding trigger foods, and/or weight loss if relevant. See Canadian Digestive Health Foundation (CDHF) guide for patients <http://cdhf.ca/en/disorders/details/id/11>

- ✓ Recommend an over-the-counter (OTC) antacid or H₂RAs for mild or infrequent symptoms.
- ✓ Follow-up at four to eight weeks to review diagnosis and reassess management.
- ✓ Add prescription medication if symptoms persist:
 - ✓ Proton pump inhibitor (PPI) OD for four to eight weeks OR
 - ✓ H₂ receptor antagonist BID for four to eight weeks
- ✓ If symptoms still do not resolve or recur:
 1. Try PPI OD for four to eight weeks (if not used previously).
 2. Increase PPI to BID for four weeks. OR
 3. Extend initial therapy to 16 weeks.
 4. Add H₂ receptor for nocturnal gastric acid breakthrough.¹
 5. Consider an alternate diagnosis.

Note: If symptoms recur once PPI tapered or stopped, endoscopy is not usually required.

PRACTICE POINT

There is no considerable difference in patient outcomes amongst different among PPIs² therefore consider lower cost PPIs covered by provincial formularies. (see: <https://www.acfp.ca/new-pricing-comparison-of-commonly-prescribed-drugs>)

- ✓ Consider endoscopy for patients:
 1. With alarm features (urgent gastroscopy)
 2. Who fail to respond to PPI therapy
 3. Patients with chronic GERD and at least three other risk factors for Barrett's esophagitis: male \geq 50 years old, Caucasian, central obesity, smokers and family history of BE³

*Note: Eradicating *H. pylori* will not improve GERD symptoms in most patients but patients diagnosed with *H. pylori*, should be treated.⁴*

- ✓ See Canadian Digestive Health Foundation (CDHF) guide for patients <http://cdhf.ca/en/disorders/details/id/11>

GERD IN PREGNANCY

- ✓ Treat GERD during pregnancy using similar step up approach (antacids, H₂RA, PPI).
- ✓ Consider omeprazole or lansoprazole if using a PPI.

BACKGROUND

INTRODUCTION

Evidence indicates that up to 36% of otherwise healthy persons suffer from heartburn at least once per month, and 7% experience daily GERD symptoms.⁵ The incidence of GERD increases with age and it is not uncommon for patients experiencing symptoms to wait years before seeking medical treatment.^{6,7}

One definition of GERD is symptoms such as heartburn or regurgitation, or complications resulting from reflux of gastric contents into the esophagus or beyond.⁸ Other less common symptoms include retrosternal discomfort or chest pain, throat irritation, laryngitis, hoarseness, and a globus sensation and rarely coughing, wheezing and asthma.

Smoking, large meals, fatty foods, pregnancy, obesity, body position, medications (e.g. HRT, asthma medication, some antidepressants, some sedatives, anticholinergics, NSAIDs, bisphosphonates, iron and potassium supplements) may precipitate or exacerbate GERD. A hiatus hernia may be present in patients with GERD but not all patients with hiatus hernia will have GERD.

INVESTIGATION OF GERD

The patient who presents with typical GERD symptoms (heartburn and/or regurgitation) without alarm features can be diagnosed by history and generally does not need any other investigations.^{4,7} If a therapeutic trial resolves symptoms, therapy can be prescribed to be taken as often as necessary (on demand therapy). If symptoms are not resolved, or there are alarm symptoms, referral to an endoscopist is recommended.⁴

Barium studies of the esophagus are widely available and well tolerated, but should not normally be used to diagnose GERD.⁸ Most patients do not require any tests before treating GERD. According to expert opinion, if investigations are required, gastroscopy may be more sensitive than barium swallow for identifying cancers, strictures, ulcers and erosions and may also be used to diagnose Barrett's esophagus.

The majority (60-70%) of patients with GERD symptoms will have normal gastroscopy (endoscopic negative reflux disease,⁴ however, patients who do have endoscopic evidence of esophagitis normally require long-term acid suppression.

BARRETT'S ESOPHAGUS

Barrett's esophagus occurs when normal epithelium is replaced by columnar metaplasia and is likely a consequence of prolonged exposure of the lower esophagus to gastric contents. Risk factors for Barrett's include chronic GERD, greater than 50 years old, Caucasian, male, central obesity and smoking.⁹

Barrett's esophagus occurs in about 10% to 15% of chronic GERD cases,¹⁰ and a small proportion of patients with Barrett's may develop esophageal adenocarcinoma. Best estimates suggest that ~1/1000 patients with Barrett's without dysplasia and 1/200 patients with Barrett's with dysplasia will develop adenocarcinoma in 5.2 years of follow up.¹¹

Recommended surveillance intervals for patients with Barrett’s esophagitis depend on the histologic findings (dysplasia or not), but best evidence does not currently support mortality benefit for screening and surveillance for Barrett’s esophagitis.¹⁰

THErapy FOR GERD

Patients should be advised to quit smoking and lose weight if overweight. Patients whose symptoms are not completely controlled by lifestyle modification may benefit from over-the-counter medications including antacids or anti-secretory agents.^{2,4}

Other lifestyle modifications such as elevating the head of the bed, avoiding recumbent positioning shortly after eating, avoiding drinking coffee or tea or eating spicy foods, pepper, peppermint and citrus foods are routinely recommended, but have limited effectiveness for controlling GERD symptoms.^{4,12}

If symptoms are not controlled by over-the-counter therapy and lifestyle modification, treatment may be initiated with a regular dose of a PPI once a day for four weeks.^{4,13}

Numerous trials have demonstrated that short-term treatment with acid suppressing agents can effectively relieve the symptoms of uncomplicated GERD. PPIs are more efficacious than placebo in improving heartburn symptoms (NNT = 2) and more efficacious than H2ANT (NNT = 5).¹⁴ It is estimated that over 85% of patients should improve with an eight week trial of PPI.² Limited evidence does not support the use of prokinetic agents in treating GERD.¹⁴

Patients whose symptoms resolve after a course of therapy need no further investigation or therapy. Therapy may be repeated if symptoms recur. For those patients who do not respond to PPI within eight weeks, a trial of twice-daily PPI for could be considered.⁴ Patients who do not respond to therapy may require further investigation and referral to gastroenterologist or endoscopist.

Although long term PPIs appear safe to use, potential risks include:

- Gastrointestinal
 - Microscopic colitis¹⁵
 - *Clostridium. difficile* () colitis: risk of community acquired *C. diff* colitis is about 1/10,000.^{16,17} Risk increases if admitted to hospital and further if on antibiotics and PPI.¹⁸
 - In patients who are on PPI and diagnosed with *C. diff* colitis: efforts to discontinue the PPI should be undertaken as the risk of recurrent *C. diff* is increased (Number need to harm = 7).¹⁹
- Pneumonia
 - Evidence pertaining to PPIs and risk of pneumonia are conflicting: some systematic reviews suggest that PPIs (and H2 antagonists) increase the risk of pneumonia,²⁰ while others do not find an association.²¹
 - Similar to *C. diff* colitis, those who have been diagnosed with a pneumonia and remain on PPI have an increased risk of recurrent pneumonia: NNH 15 over five years.²²

- Fracture
 - While PPIs have been associated with increase fractures, best evidence suggests that for women on PPIs, one additional fracture will occur in 2000 patients over eight years.²³
- Micronutrients
 - Observational data suggests that patients on long term acid suppression are at increased risk of vitamin B 12 deficiency²⁴ and magnesium deficiency.²⁵

GERD IN PREGNANCY

Many pregnant women have symptoms of GERD and primarily heartburn. Symptoms can start at any stage of pregnancy and may become worse as pregnancy progresses. GERD symptoms are common during pregnancy, rarely cause esophageal complications and usually resolve after birth.

Treating GERD in pregnancy is no different than treatment for anyone with GERD including focusing on lifestyle changes and non-prescription medicines as a first step.

Lifestyle changes include stopping smoking; eating smaller frequent meals and waiting two to three hours before lying down or going to bed may be helpful.

Non-prescription antacids such as Roloids® or Maalox® for relief of heartburn symptoms can be used. Antacids that contain calcium carbonate (such as Tums®) are acceptable but those containing sodium bicarbonate should be avoided because of fluid retention risk.

If medication is required, it is preferable to start with an H2 receptor antagonist e.g., ranitidine to control symptoms. If H2 receptor antagonists are ineffective consider a PPI. Omeprazole or lansoprazole can be prescribed and are generally considered safe for use in pregnancy.⁸

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SUGGESTED CITATION

Toward Optimized Practice (TOP) Working Group for GERD. 2009 January. Treatment of gastroesophageal reflux (GERD) disease in adults: clinical practice guideline. Edmonton, AB: Toward Optimized Practice. Available from <http://www.topalbertadoctors.org>

For more information see www.topalbertadoctors.org

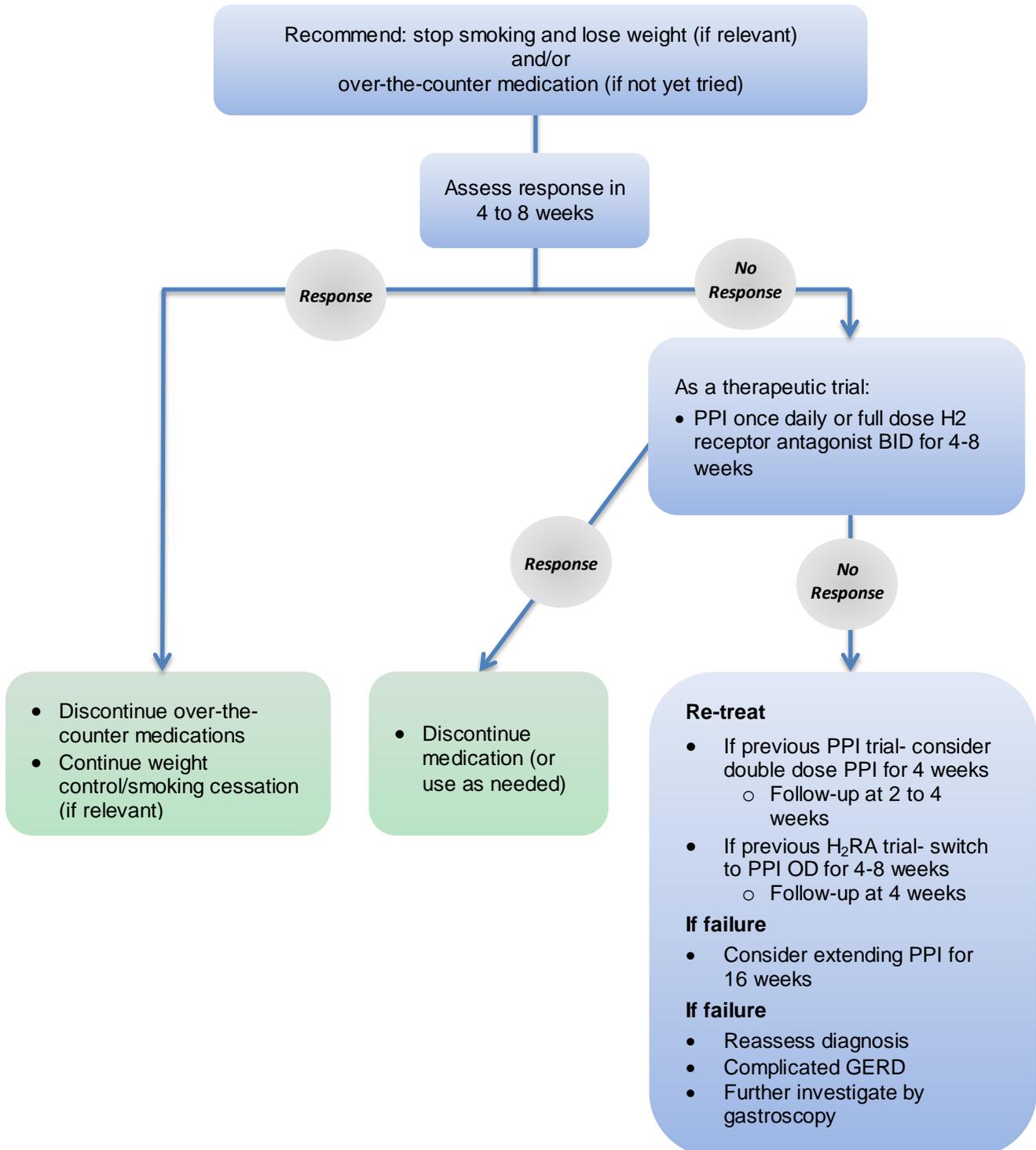
GUIDELINE COMMITTEE

The committee consisted of representatives of family medicine, general medicine, gastroenterology, pediatric gastroenterology, pathology, diagnostic radiology, radiation oncology, infectious diseases, the public and the Alberta Pharmaceutical Association.

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ALGORITHM

MANAGEMENT OF UNCOMPLICATED GERD



These recommendations are systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances. They should be used as an adjunct to sound clinical decision making.