

# Dyspepsia and Heartburn / GORD

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## Red Flags

- Chest pain if known or suspected ischaemic heart disease

## Background

### About Dyspepsia and Heartburn / GORD

- Dyspepsia and heartburn/GORD are very common symptoms and upper gastrointestinal (GI) malignancy is rare. Gastroscopy is rarely indicated in the diagnosis or management of heartburn or dyspepsia in patients that are young, or without red flag features. Individual alarm symptoms (e.g. pain or vomiting, weight loss), have a low positive predictive value for upper GI cancer, but this is improved when multiple alarm features are present.
- Management requires an individually-tailored combination of lifestyle modification and drug treatment.
- Gastro-oesophageal reflux (GORD) responds better than dyspepsia to proton-pump inhibitors (PPIs).
- Oesophageal cancer is rare – incidence of 4.6/100,000. It is 10 times less common than colon cancer, and often presents with progressive [dysphagia](#). Barrett oesophagus, when the distal oesophageal mucosa changes to columnar type i.e., metaplasia, is a risk factor along with age and sex.
- Gastric cancer is rare – incidence of 5.4/100,000. The positive predictive value of red flags is very low. It often presents late with anaemia and epigastric pain. Risk factors for gastric cancer is *Helicobacter pylori* colonisation of the stomach, tobacco smoking, family history, pernicious anaemia, and previous partial gastrectomy.

## Assessment



### Practice Point - Rule out ischaemic heart disease

If new onset symptoms and cardiovascular risk factors, rule out ischaemic heart disease, which can occasionally present like heartburn or dyspepsia.

#### 1. History:

- Determine whether **heartburn or dyspepsia** or a combination of both

#### Heartburn or dyspepsia

*Differentiation of symptoms may help to guide therapy.*

- *Heartburn is burning pain or discomfort, moving up from the epigastrium into the chest or throat. It is due to reflux of acid into the oesophagus.*
  - *Dyspepsia (postprandial epigastric discomfort) without heartburn is most commonly due to abnormal gastrointestinal sensory and motor function (functional dyspepsia). This may be linked to psychosocial factors.*
- Ask about:
    - **clinical features warranting further evaluation.**

## Clinical features warranting further evaluation

- *Recent onset, persistent symptoms of gastroesophageal reflux with:*
  - [Dysphagia](#)
  - *Unintended weight loss ( $\geq 5\%$  of body weight in previous 6 months)*
  - *Vomiting, with or without haematemesis*
  - *Iron deficiency that persists despite correction of potential causative factors*
- *Surveillance for previously diagnosed Barrett oesophagus*
- *Family history of gastric cancer with onset aged  $< 50$  years*
  
- **common triggers.**

## Common triggers

- *Alcohol, smoking*
- *Change in posture (lying down)*
- *Chocolate*
- *Pregnancy*
- *Spicy, fatty food*
  
- diet, alcohol, smoking.
  
  
- Check BMI
- Review **medications**

## Medications

- *Medications, including over the counter, that have been tried, as well as current medications.*
- *Consider the effects of NSAIDs, aspirin, and COX-2 inhibitors.*
- *Consider the use of medications causing oesophageal irritation including bisphosphonates, doxycycline, some iron and potassium supplements.*
  
- Consider appropriate differential diagnoses, including cardiac, respiratory, biliary, or pancreatic causes

### 2. Perform an examination:

- Abdomen – may be normal, or mild epigastric tenderness. If right upper quadrant pain, consider gall bladder pathology.
- Mouth – for ulceration or scleroderma.
- Lymph nodes in neck.
- Cardiac and respiratory examination.
- Assess mental state and emotional wellbeing.

### 3. Arrange investigations:

- ECG
- Blood tests – not usually required for simple dyspepsia, but consider FBE, urea, electrolytes, and creatinine (UEC), LFTs, ferritin, and coeliac serology if indicated.
- Upper abdominal ultrasound – if abnormal UEC, LFTs, abdominal mass, or suspected gall bladder pathology.

- Consider ***helicobacter pylori* testing**, especially if there are **risk factors for *H. pylori* infection**.

### Risk factors for *H. pylori* infection

- Aged > 60 years
- Past history of peptic ulcer
- Aboriginal patient
- Originate from areas of high *H. pylori* prevalence (> 30%) e.g., Asian, Mediterranean, and African countries.

Note that the incidence in non-Aboriginal Australian-born patients aged < 50 years is very low. However, some international guidelines advocate testing all dyspeptic patients.

### *Helicobacter pylori* testing

Testing for *H. pylori* implies an intention to treat if positive. Blind testing of all dyspeptic patients or treating them empirically for *H. pylori* without testing is not recommended. *H. pylori* is associated with peptic ulcer disease and is a risk factor for gastric adenocarcinoma.

There are 3 diagnostic tests for *H. pylori* available in the primary care setting:

- **Serology**
  - Simplest test.
  - Least reliable test – sensitivity 86 to 94% and specificity 80 to 95% using enzyme-linked immunosorbent assay (EIA) method.
  - Test turnaround time is approximately 1 to 4 days.
  - Not useful for patients with previous *H. pylori* infection or following eradication therapy because antibody titres decline slowly and variably and may persist at detectable levels for 6 to 12 months or longer.
- **Faecal antigen test**
  - Good sensitivity (88 to 98%) and specificity (89 to 98%).
  - Test turnaround time approximately 3 to 7 days.
  - Pretest:
    - No antibiotics for 4 weeks.
    - No proton-pump inhibitors (PPIs) for 2 weeks.
    - H2RAs, antacids, and alginates are allowed.
  - Can be used to test post-treatment, when necessary, although there is still some debate about its usefulness in this situation.
  - May be useful when the patient is unable to complete the breath test (child, pregnant, or breastfeeding).

Allow at least 4 weeks after completion of treatment and stop PPIs for 1 to 2 weeks before retesting, if post-eradication testing is necessary.

- **Urea breath test**
  - Considered the gold standard test.
  - Good sensitivity (90 to 96%) and specificity (88 to 98%).
  - Available at all laboratories.

- *Pretest:*
  - *Requires patient to be fasting.*
  - *No antibiotics for 4 weeks pretest.*
  - *No proton pump inhibitors (PPIs) for 2 weeks pretest – antacids and alginates are allowed.*
- *Can be used to test post-treatment. If post-eradication testing is necessary, allow at least 4 weeks after completion of treatment and stop PPIs for 2 weeks.*

*Patients who may require confirmation of eradication include those with:*

- *peptic ulcer complication.*
- *important co-morbidity factors.*
- *symptom recurrence.*
- *residence in isolated areas.*

*In resistant cases, gastroscopy and in vitro sensitivity testing may be useful.*

*If endoscopy is being considered as part of the patient assessment, H. pylori testing by histology can be used for testing.*

## Management

1. If suspected ischaemic heart disease, follow the Acute Chest Pain management guidelines.
2. If acute upper GIT bleeding with haemodynamic instability, refer for [immediate gastroenterology assessment or admission](#).
3. Refer for gastroscopy or [urgent or routine gastroenterology assessment](#) if:
  - Recent onset, persistent symptoms of gastroesophageal reflux with:
    - Unintended weight loss ( $\geq 5\%$  of body weight in previous 6 months)
    - Dysphagia
    - Vomiting, with or without haematemesis
    - Iron deficiency that persists despite correction of potential causative factors
  - Surveillance for previously diagnosed Barrett oesophagus
4. Stop any aggravating medications e.g., non-steroidal anti-inflammatory drugs (NSAIDs), aspirin. Consider stopping oral bisphosphonates and using other medications for osteoporosis.
5. Review ***lifestyle factors***.

### Lifestyle factors

- *Healthy eating:*
  - *Smaller meals, reducing fatty and spicy foods*
  - *Eating slowly, sitting down in a calm relaxed place*
  - *Waiting 2 to 3 hours after eating before lying down, not eating before bed*
- *Reducing weight and increasing physical activity*

- [Stopping smoking](#)
- [Limiting alcohol](#)
- Avoiding triggers
- Wearing loose clothing
- Raising the head of the bed 15 to 20 cm

6. Manage specific conditions:

- **Dyspepsia**

### Dyspepsia

A suggested approach:

- Use an antacid (or alginate) for immediate relief of symptoms.
- Prescribe a full dose proton-pump inhibitor (PPI), e.g., omeprazole 20 mg for 1 month.
- If there is no response to a PPI, trial a prokinetic (e.g., domperidone, metoclopramide) for 1 month.
- If there is no response to PPI or prokinetic, consider a trial of low-dose amitriptyline 10 to 25 mg at night (off-label) for at least 1 month as neuromodulation to reduce symptoms.
- *If there is no response to lifestyle advice and the above steps, request [urgent or routine gastroenterology referral](#).*

## 7. Heartburn or GORD

### Heartburn or GORD

- Use step-down regime in 4- to 8-week steps:
  - Step 1 Start with full-dose proton-pump inhibitor (PPI) e.g., omeprazole 20 mg, pantoprazole 40 mg, lansoprazole 30 mg. Take 30 minutes before breakfast with water for optimal acid suppression.
  - Step 2:
    - *If the patient responds, gradually reduce the dose to determine the lowest treatment level of acid suppression compatible with adequate symptom control.*
    - Reduce to half dose PPI.
    - Trial PPI on-demand based on symptom control.
- *If there is no, or inadequate, response to the full dose PPI after 8 weeks, reconsider diagnosis, request [urgent or routine gastroenterology referral](#).*
- *Do not continue ineffective therapy in the long term.*

- **Dyspepsia and heartburn in pregnancy**

### Dyspepsia and heartburn in pregnancy

GORD is the most common cause of dyspepsia and heartburn in pregnancy.

1. Advise **lifestyle and dietary modification**. Heartburn and reflux have been shown to exacerbate nausea and vomiting, so managing these conditions, by making dietary changes or using medications, may help improve symptoms.

#### **Lifestyle and dietary modification**

- *Healthy eating – eating smaller meals, reducing fatty foods, and not eating before bed*

- [Smoking cessation](#)
  - [Stopping alcohol](#)
  - Avoiding triggers
2. In patients with persistent symptoms, begin pharmacologic therapy with antacids or alginates.
    - Alginates e.g., Gaviscon, are particularly useful if heartburn symptoms are predominant.
    - Antacids containing aluminium or calcium are safe.
    - Avoid antacids containing sodium bicarbonate and magnesium trisilicate.
  3. If symptoms are more severe, or persist, consider prescribing an acid-suppressing medicine e.g., ranitidine (B1 – manufacturer advises avoid unless essential, but not known to be harmful) or omeprazole (B3 – not known to be harmful).
    - Both of these medications are considered to be relatively safe in pregnancy.
    - Omeprazole is more effective. As with any medicine used in pregnancy, especially in the first trimester, treat with the minimum effective dose for the shortest possible time.
    - If required, contact the [Obstetric Medicines Information Service](#) for medicines advice in pregnancy and breastfeeding.

- **Helicobacter pylori** treatment if positive

### H. pylori treatment

- Triple therapy e.g., omeprazole 20 mg twice a day + amoxicillin 1 g twice a day + clarithromycin 500 mg twice a day (Nexium HP7) – all for 7 days.
  - Substitute metronidazole for amoxicillin in penicillin-allergic patients.
  - Emphasise the need to complete the full course and warn of side effects.
  - Treatment is 80 to 90% effective, so there is no need to check for eradication unless there are persisting symptoms or clinical concern e.g., bleeding peptic ulcer, family history of gastric cancer.
  - If eradication needs to be checked, use the stool antigen or breath test.
- If initial treatment fails, check compliance. Request [urgent or routine gastroenterology referral](#).

7. Review **long-term use of proton-pump inhibitors (PPIs)**.

### Review long-term use of proton pump inhibitors (PPIs)

- There is potential risk for serious adverse effects from long-term PPI use, including increased fracture risk, [hypomagnesaemia](#), hypocalcaemia, [vitamin B12 deficiency](#), pneumonia, enteric infection, and acute interstitial nephritis. The risks are very low. However, the least possible dose for adequate symptom control is recommended.
- Review the patient regularly, and use the **step-down regime** to try stopping PPIs.

#### Step-down regime

Use step-down regime in 4- to 8-week steps:

- Step 1: Start with full-dose proton-pump inhibitor (PPI) e.g., omeprazole 20 mg, pantoprazole 40 mg, lansoprazole 30 mg. Take 30 minutes before breakfast with water for optimal acid suppression.

- *Step 2: Reduce to half-dose PPI.*
- *Step 3: Change to H2RA e.g., ranitidine 150 to 300 mg twice a day.*
- *Step 4: Change to antacids or alginates as required.*
- *PPIs are not needed long-term in dyspepsia. Short-term use is suggested.*
- *Long-term PPI therapy may be required for:*
  - *severe GORD or if frequent recurrences of GORD. It is important to use the lowest possible effective dose.*
  - *gastric protection with NSAIDs.*
  - *complicated diseases or Barrett oesophagus. These patients should be under specialist review, which may include endoscopic surveillance.*

## Referral

- If acute upper GIT bleeding with haemodynamic instability, refer for [immediate gastroenterology assessment or admission](#).
- Refer for gastroscopy or [urgent or routine gastroenterology](#) assessment if:
  - Recent onset, persistent symptoms of gastroesophageal reflux with:
    - Unintended weight loss ( $\geq 5\%$  of body weight in previous 6 months)
    - Dysphagia
    - Vomiting, with or without haematemesis
    - Iron deficiency that persists despite correction of potential causative factors
  - Surveillance for previously diagnosed Barrett oesophagus

## Information

### For health professionals

#### Further information

- Australian Family Physician – [Helicobacter Pylori Eradication](#)
- Australian Prescriber:
  - [Peptic Ulcer Disease and Non-steroidal Anti-inflammatory Drugs](#)
  - [Proton Pump Inhibitors: Too Much of a Good Thing?](#)
- Gastroenterological Society of Australia (GESA):
  - [Gastro-oesophageal Reflux Disease](#)
  - [NSAIDs and the Gastrointestinal Tract](#)

### For patients

- Better Health Channel – [Indigestion](#)
- Gastroenterology Society of Australia (GESA):
  - [Gastroscopy \(Upper Endoscopy\)](#)
  - [Heartburn \(Oesophageal Reflux\)](#)
- HealthInfo – [Understanding Gastroscopy](#)

## References

### References

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