

Management of dyspepsia

Key messages

- Gastro-oesophageal reflux disease is the only cause of dyspepsia that can be reliably diagnosed by symptoms alone.
- All people should be screened for alarm symptoms, and referred immediately to their general practitioner if indicated.
- People with frequent, severe or frequently recurring symptoms should be referred to their general practitioner.
- A symptom based approach to treatment of GORD is appropriate in the community pharmacy setting.

What is dyspepsia?

Dyspepsia is a group of symptoms, not a diagnosis or disease. Symptoms may include: upper abdominal discomfort, heartburn, retrosternal pain, epigastric pain, nausea, vomiting, bloating, early satiety (sensation of fullness), regurgitation, excessive burping/belching, water brash (patient's mouth suddenly fills with saliva) or anorexia (loss of appetite).¹⁻³

Diseases causing dyspepsia include gastro-oesophageal reflux disease (GORD), peptic ulcer (duodenal or gastric), gallstones, and cancer of the oesophagus, stomach or pancreas. However in a large proportion of cases no clear pathological cause can be determined.²

Symptoms are not a good guide to source of pathology.

GORD is the only cause of dyspepsia that can be reliably diagnosed based on symptoms alone. Symptoms of the other causes of dyspepsia overlap and are poor predictors of disease.⁴

GORD is defined as mucosal damage or symptoms resulting from exposure of the oesophagus to refluxed gastric contents.⁵ Dyspepsia where heartburn is the dominant symptom is usually sufficient for the diagnosis of GORD. Symptoms usually respond to antacid or acid suppression therapy, i.e. H₂ antagonist or proton pump inhibitor.

Patients and health professionals may interpret common symptoms differently. Providing a description of heartburn has been shown to improve diagnostic accuracy.⁶ **Heartburn** should be described as a 'burning feeling rising from the stomach or lower chest towards the neck'. It is typically provoked by specific foods, bending, straining or lying down.

Assessment of dyspepsia

History taking should guide selection of over-the-counter therapy and identify people who would benefit from referral to a general practitioner (Figure 1). The benefits of referral may include physical examination and investigation resulting in the identification and treatment of gastrointestinal pathology⁵ such as peptic ulcer or cancer.

Identify and refer:

- people with frequent (on more than 2 days of the week), severe (interferes with normal activities), non-resolving (despite appropriate therapy) or frequently recurrent symptoms (recur within 5 days of spontaneous recovery or stopping treatment)
- people with alarm symptoms suggesting cancer, stricture or severe ulceration (see Figure 2, inside). The prognosis of upper gastrointestinal cancer is improved if the cancer is identified early
- people with symptoms suggesting cardiac disease.⁷ Discomfort worsened by exercise or that radiates to the arms or throat is of particular importance. Early detection of cardiac disease may allow intervention before the patient suffers a heart attack.

Consider referring:

- people with dyspepsia symptoms not consistent with GORD, especially if severe or recurrent
- people taking drugs that may exacerbate dyspepsia, e.g. aspirin, NSAIDs, anticholinergic agents, theophylline, dopaminergic agents, alendronate and calcium-channel blockers.⁸



Management of GORD

Often, people presenting in primary care have minor symptoms or symptoms that have been present for a short period. In these cases, a carefully taken history, reassurance, and the provision of symptomatic treatment will be sufficient, provided that the patient is followed up to ensure symptoms resolve and don't frequently recur (see Figure 1).⁹

Lifestyle modification in GORD

The aims of lifestyle modification are to enhance oesophageal acid clearance and minimise the frequency of reflux episodes. The controlled trial data is sparse. Clinical experience suggests that people with mild symptoms may derive benefit from dietary modification, weight reduction and smoking cessation.^{7,8} Raising the bed head may benefit people with nocturnal symptoms.¹⁰

OTC drug treatments for GORD

Antacids

Aluminium hydroxide, calcium carbonate and magnesium salts are used either alone or in combination as antacids. Definitive evidence of efficacy of antacids is unavailable because of lack of well-controlled trials.¹¹ Some preparations contain alginic acid for the purpose of forming a 'raft' over the surface of the gastric contents, simethicone as an antifatulent agent or oxethazaine as a local anesthetic.¹² Claims are made that these agents improve the efficacy of antacids but there is limited evidence to support this.¹³

Choose an antacid depending on adverse effects and patient co-morbidities. Aluminium hydroxide may have a constipating effect, while magnesium salts may cause diarrhoea. These two salts are often combined to reduce adverse effects, however the effect of the magnesium salt is not completely counteracted by the aluminium hydroxide. Product sodium content should be considered in people with heart failure, chronic renal failure, cirrhosis or oedema.¹³ Consider sugar content in patients with diabetes.

H₂ antagonists

The only H₂ antagonists currently marketed for over-the-counter sale in Australia are famotidine and ranitidine. Both agents are well absorbed orally. Their absorption is reduced by concurrent administration of antacids.¹²

Doctors often prescribe ranitidine 300 mg daily or famotidine 40 mg daily. Ranitidine supplied over-the-counter is recommended to be used 150 mg as needed up to 300 mg daily, famotidine supplied over-the-counter is recommended to be used 20 mg as needed up to 40 mg daily. No study was found that compared as needed dosing of H₂ antagonists to regular dosing. However the best available evidence suggests that 75 mg and 125 mg doses of ranitidine are effective when used as needed to relieve the symptoms of GORD.^{14,15-17}

Product selection should be based on potential drug interactions, patient co-morbidities, patient preference and symptom patterns.

Drug treatments for mild intermittent GORD

Mild, intermittent disease or occasional symptoms, should be managed with lifestyle modification and antacid or H₂ antagonists if required (see Figure 3). More severe GORD should be managed with prescription acid suppression therapy and possibly investigation for other causes.

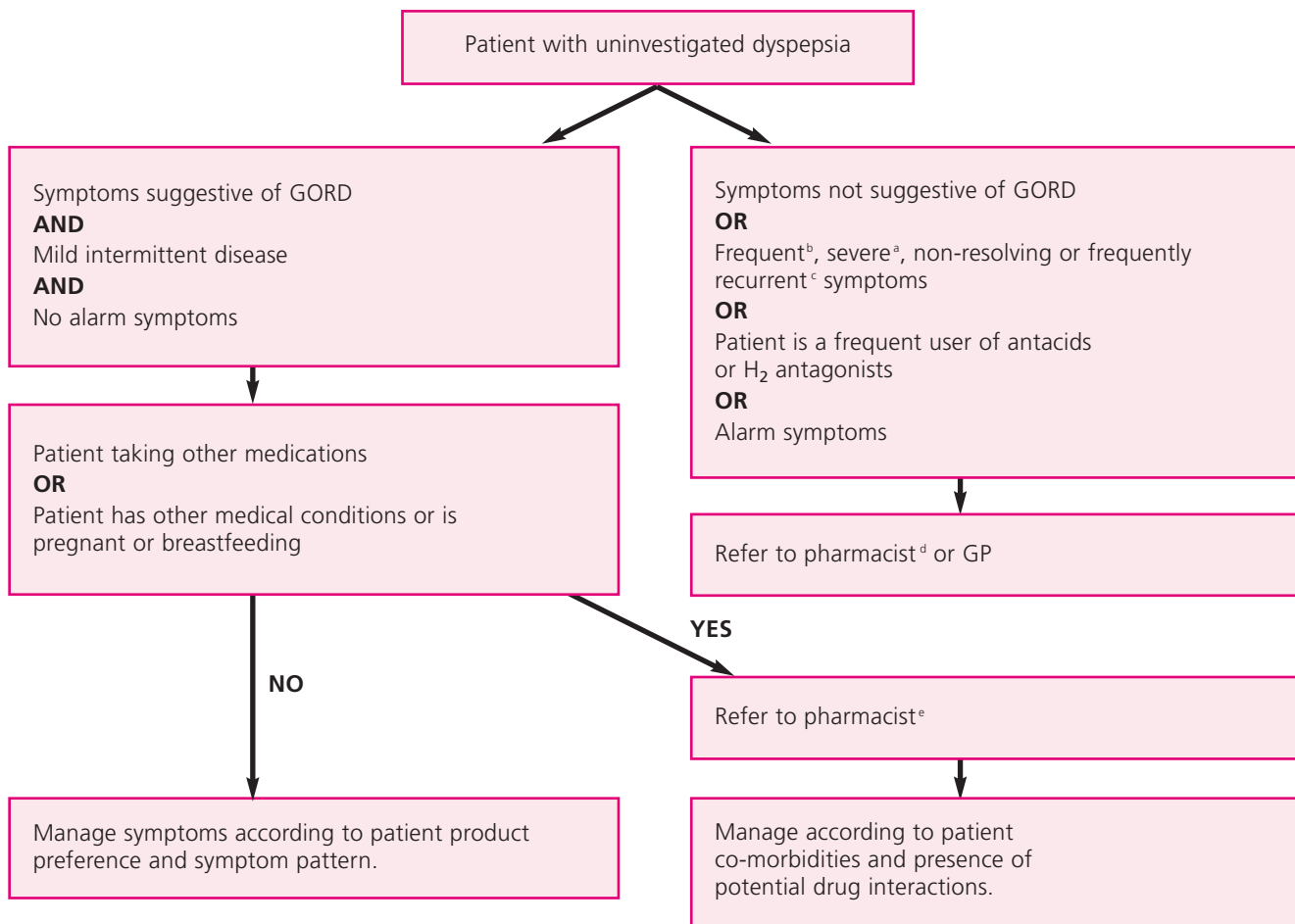
Product selection should be based on potential drug interactions, patient co-morbidities, patient preference and symptom patterns. For example, antacids offer rapid onset, short duration symptom relief so are appropriate for people with occasional symptoms. Whereas H₂ antagonists offer slower onset, longer lasting relief and will be of most benefit in people that have an episodic pattern of symptoms, e.g. symptoms present throughout the day for a week.

Pregnancy

Heartburn is a common complaint in pregnancy. Antacids are all ADEC category A.¹³ Consider the sodium content of products for women with fluid retention and glucose content in women with diabetes.

H₂ antagonists are ADEC category B1 and can be used if indicated.¹³ Less experience and safety data are available compared with antacids, hence antacids are preferred unless directed by a physician.

Figure 1: Management of uninvestigated dyspepsia in community pharmacy



- a Frequent = more than two days of the week.
- b Severe = interferes with normal activities.
- c Frequently recurrent = recur within 5 days
- d Pharmacy assistants should refer to the pharmacist for referral to a GP.
- e If originally served by the pharmacy assistant.

Figure 2: Alarm symptoms

- First symptoms of dyspepsia in people over 45 years
- Unintentional weight loss
- Anorexia
- Dysphagia (difficulty swallowing)
- Odynophagia (painful swallowing)
- Haematemesis (vomiting blood)
- Melaena (altered blood in faeces)
- Persistent vomiting
- Change in bowel habit e.g. constipation or diarrhoea
- Coughing spells
- Abdominal mass*
- Hepatomegaly (enlarged liver)*
- Anaemia/ pallor*

* These signs are difficult to determine in a community pharmacy setting. Refer to a GP if suspicious.
 NB: All symptoms should be regarded as more serious in people who are over the age of 45.

Figure 3: Drug treatments for mild intermittent GORD¹²

- magnesium hydroxide plus aluminium hydroxide preparations 10 to 20 mL orally, as required
- OR**
- antacid plus alginate preparations 10 to 20 mL orally, up to 4 times daily
- OR**
- famotidine 20 mg orally, once or twice daily as required
- OR**
- ranitidine 150 mg orally, once or twice daily as required

A word of warning

There is considerable debate over whether a 'step-up' (i.e. start with antacids) or a 'step-down' (i.e. start with proton pump inhibitors) approach should be used when managing GORD. We have adopted a 'step-up' approach to reflect the likely spectrum of people presenting to community pharmacy. An important feature of this approach is the referral to a general practitioner of people with alarm features and symptoms that do not respond to over-the-counter therapy, or that frequently recur.

When considering the evidence for over-the-counter management of dyspepsia it is important to acknowledge the limitations of available trials. Most dyspepsia trials have been conducted in people selected by doctors with a specific diagnosis

(backed by endoscopic evidence), often in secondary and tertiary care centres. In Western countries, up to 40% of individuals complain of dyspepsia, however only 25% of these present to their general practitioner.⁹ This means that the information provided by these trials may not be generalisable to people who present in community pharmacy.

The placebo effect in clinical trials of treatments for dyspepsia is very high (mean 56%; range 5–90%),¹ which means that any gains from medication are difficult to measure. The many different definitions of dyspepsia and different endpoints for benefit used make comparisons between trials difficult.

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The information contained in this material is derived from a critical analysis of a wide range of authoritative evidence. Any treatment decisions based on this information should be made in the context of the individual clinical circumstances of each patient.



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