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Proton pump inhibitors in primary care

Key Messages

- Prescribe a 4-week course when initiating a proton pump inhibitor (PPI)
- Step down to intermittent, symptom-driven PPI therapy or to a lower dose if maintenance is required
- Communicate the goal and duration of PPI therapy to the patient and on referral or hospital discharge
- Review the underlying need for an NSAID before considering co-prescribing a PPI

PPIs are now the standard treatment for gastro-oesophageal reflux disease (GORD)

Proton pump inhibitors (PPIs) provide rapid and effective control of the symptoms of gastro-oesophageal reflux disease (GORD) and dyspepsia, with few adverse effects. These are now prescribed in most new cases of GORD.* Continuous use at a standard dose is common practice, but may represent more intensive therapy than many patients require.

Initiating treatment with a proton pump inhibitor

Are there alarm symptoms?

Refer patients with one or more alarm symptoms (gastrointestinal bleeding, upper abdominal mass, difficulty/pain on swallowing, unexplained weight loss or persistent vomiting) for endoscopy — on the same day in cases of significant acute bleeding.[1,2]

In the absence of alarm symptoms, empirical PPI therapy is suitable for patients with dyspeptic symptoms.[1,2]

Prescribe a single 4-week course in uninvestigated dyspepsia or newly diagnosed GORD

A single initial course of standard-dose PPI (see Table 1, page 4) will control symptoms and heal gastro-oesophageal lesions[3]; oesophagitis healing rates average about 75% after 4 weeks of therapy.[3] Patients with persistent or recurring symptoms should return for review.

More than 1 patient in 5 has at most mild symptoms for at least the next 6 months after a short course of a PPI.[3-5] If symptoms do require ongoing management, step down to low-dose or intermittent, symptom-driven therapy (see *How to step down PPI therapy,* page 2). Continuous standard-dose maintenance therapy is indicated if severe or complicated oesophagitis has been established by endoscopy.

* Source: BEACH data, Australian General Practice Statistics and Classification Centre, a collaborating unit of the Family Medicine Research Centre, University of Sydney and the Australian Institute of Health and Welfare.

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Consider test-and-treat for *Helicobacter pylori* infection in uninvestigated dyspepsia without predominant GORD symptoms

Patients with predominant symptoms of heartburn or acid regurgitation are likely to have GORD and should be treated as above. For others, testing for *H. pylori* infection and treating with triple therapy is an alternative to empirical PPI treatment. This controls symptoms for 12 months in about 60% of those testing positive for *H. pylori*.[3]

Recent guidelines recommend test-and-treat either on initial presentation with dyspepsia (if alarm symptoms are absent) or as second-line if the initial 4 weeks of PPI therapy fails.[3]

How to step down PPI therapy

Review maintenance therapy once or twice yearly

In patients taking maintenance PPIs, review to determine ongoing need. Step down to intermittent or low-dose therapy if symptoms are well controlled, or discuss stopping therapy (unless there is a diagnosis of severe oesophagitis, strictures, scleroderma or Barrett's oesophagus).[1,2] A small proportion of patients with an inadequate response to standard-dose PPI may require a high-dose PPI or referral to a specialist.

Discuss intermittent, symptom-driven maintenance therapy

Evidence from randomised controlled trials in non-erosive and mild erosive GORD shows that intermittent, symptom-driven maintenance therapy results in rates of patient satisfaction similar to those for continuous therapy, even though patients experience some symptoms.[3,6–8] Survey data suggest that patients take their treatment as required, regardless of the prescribed instructions.[9]

Advise patients to take a PPI on days when symptoms occur and to return for review if this becomes a continuous requirement. The maximum effect of PPIs may only be reached after repeated doses.[10]

Prescribe low-dose maintenance therapy

Continuous low-dose PPI maintenance therapy (Table 1) controls symptoms in most people who have completed a 4-week course of standard-dose therapy.[3] Avoid supplying standard-strength PPI samples for continuous maintenance therapy unless specifically required.

Communicate the goal and duration of therapy

Tell the patient the goal of initial or ongoing therapy with a PPI

Reassure patients that dyspeptic symptoms are usually benign, respond well to PPI therapy and may resolve after an initial 4-week course that allows healing.

If maintenance therapy is needed in the absence of severe or complicated oesophagitis, explain that the primary purpose is to control symptoms and that the need for therapy will be reviewed every 6–12 months. In severe diagnoses, explain that PPIs are needed continuously to prevent serious complications.

Ask about the duration of therapy when referring for investigation

When referring for endoscopy, request specific details about the need for ongoing therapy. Milder grades of oesophagitis may heal with few residual symptoms after a 4–8-week course of a PPI, while the role of PPIs in non-ulcer dyspepsia† is limited.

If the indication for ongoing therapy is uncertain, stop the PPI and review

The indication for PPIs prescribed in hospital may be unclear at discharge. If a need for ongoing therapy cannot be established, review before prescribing a further course. If there is a need for maintenance therapy, try stepping down to intermittent, symptom-driven dosing or a low dose (see *How to step down PPI therapy,* above).

† When reflux, ulcer, and malignancy are absent on endoscopy.

Self-managing dyspepsia

Self-management is effective for mild or intermittent symptoms

Symptoms of dyspepsia are very common, but only about 1 in 6 Australians has consulted a GP about them.[11] Mild or intermittent symptoms that do not interfere with daily activities are typically self-managed — strategies include avoiding triggers (which may relate to certain foods or behaviours) and using over-the-counter products such as antacids/alginate or H_2 antagonists.

The threshold for clinical management may vary from patient to patient, but consider it:

- if symptoms are of recent onset and do not resolve spontaneously
- if symptoms are severe
- if symptoms occur more than twice a week
- if symptoms recur within 5 days of spontaneous recovery or stopping treatment with antacids/alginate or non-prescription H_2 antagonists.

After initial healing, many patients can self-manage even if minor symptoms remain

Studies in uninvestigated dyspepsia have found that 6–12 months after a short course of PPIs for initial symptom control, 20–40% of patients experienced at most mild symptoms and did not require another prescription.[4,5]

Advise patients to return for review rather than self-manage if they experience alarm symptoms or recurrent troublesome dyspepsia or reflux.

Managing the gastrointestinal adverse effects of NSAIDs

Minimise NSAID use, especially in high-risk patients

Patients aged 65 or more, using anti-coagulants or oral corticosteroids, with serious illness or a history of peptic ulcer are at increased risk of NSAID-related gastrointestinal ulcer complications.[12] Consider stopping or reducing the dose of NSAIDs in these patients. Use NSAIDs short term, or intermittently as needed. Paracetamol is first-line for musculoskeletal pain, and may also be used in combination to reduce the required NSAID dose.[13]

PPIs reduce NSAID-related dyspepsia but their effectiveness in preventing ulcer complications is uncertain

PPIs and double-dose H_2 antagonists reduce the dyspepsia common when using both conventional and COX-2 selective NSAIDs, and reduce the incidence of NSAID-related endoscopically detectable ulcers.[14–16] However, it is unknown how well they prevent clinical ulcer complications. Recurrence rates of complicated ulcer are high (5% in 6 months) in patients with a recently healed ulcer who receive an NSAID combined with a PPI.[17,18]

Consider gastroprotection for high-risk patients only

The benefit of gastroprotection is small in patients without risk factors for ulcer and may not outweigh the costs and harms.[2]

The recommended gastroprotective strategies are co-prescribing a PPI, double-dose H_2 antagonist, or misoprostol with a conventional NSAID, or substituting a COX-2 selective NSAID.[2,3] Misoprostol‡ 800 micrograms daily prevents serious ulcer complications, but may cause diarrhoea and nausea.[19] All NSAIDs should be used with caution in patients with cardiovascular risk factors (see *NPS RADAR, Aug 05: Elevated cardiovascular risk with NSAIDs?*). Concomitant low-dose aspirin eliminates any gastrointestinal safety advantage of COX-2 selective NSAIDs.[13]

‡ Misoprostol must not be used in pregnancy.

Stop NSAIDs in diagnosed peptic ulcer. Prescribe 4–8 weeks' PPI therapy for ulcer healing

Guidelines recommend 4–8 weeks of a standard-dose PPI or double-dose H_2 antagonist for ulcer healing.[2,3,13] Do not switch to a COX-2 selective NSAID in active peptic ulcer.[2] For gastric ulcer, endoscopy is advisable at 6–8 weeks after treatment to confirm healing and exclude malignancy.[2]

There is some evidence in patients with a history of dyspepsia or ulcer that *H. pylori* elimination before starting an NSAID can reduce the risk of complicated ulcer.[20]

Low-dose aspirin for cardiovascular prevention must be continuous

Low-dose aspirin must be taken continuously to prevent cardiovascular events. To minimise the risk of serious ulcer complications in patients with gastrointestinal risk factors, avoid combining low-dose aspirin with an NSAID. Prescribe aspirin for secondary prevention of ischaemic events or primary prevention when the benefit outweighs the harms (see *NPS Prescribing Practice Review 24 — Using antithrombotics: maximising benefits; minimising risks*). As with NSAIDs, consider co-prescribing a gastroprotective agent in patients at high risk of ulcer complications.[2]

Table 1: Standard and low doses of PPIs[2]

PPI	Standard dose*	Low dose*
esomeprazole Nexium	20 mg daily†	20 mg daily
lansoprazole Zoton	30 mg daily	15 mg daily
omeprazole Acimax, Losec, Meprazol, Omepral, Probitor	20 mg daily	10 mg daily‡
pantoprazole Somac	40 mg daily	20 mg daily
rabeprazole Pariet	20 mg daily	10 mg daily

* Standard dose refers to the dose usually recommended for initial therapy in uninvestigated dyspepsia, GORD, or oesophagitis. Low dose refers to the lower dose recommended for maintenance therapy.

† 40 mg daily is indicated for erosive reflux oesophagitis.

‡ Losec tablets are the only brand of omeprazole available in a 10 mg strength.

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