Gastro-oesophageal reflux disease

By Madeline Thompson

Gastro-oesophageal reflux occurs when acid from the stomach leaks into the oesophagus, the food pipe connecting the throat to the stomach. The most common symptom of gastro-oesophageal reflux is heartburn, a burning feeling rising from the stomach or lower chest towards the throat. When heartburn is frequent and troublesome, medicines may be needed to control symptoms and prevent damage to the lining of the oesophagus.

Gastro-oesophageal reflux can be caused by increased pressure in the stomach which is too high for the lower oesophageal sphincter to withstand.

Pharmacy assistants can help customers to select an appropriate medicine to relieve heartburn and advise them on the safe and correct use of these medicines. You can also advise customers on diet and lifestyle changes that may help to reduce or prevent heartburn, and recognise when it is appropriate to refer customers to the pharmacist for advice.

What is gastro-oesophageal reflux?

When we eat, food passes down the oesophagus into the stomach where it is broken down and digested by stomach acid and other chemicals. There is a circular band of muscle (a ‘sphincter’) at the bottom of the oesophagus that works like a valve. Normally it relaxes to allow food to move into the stomach and then tightens up to prevent the contents of the stomach from leaking back into the oesophagus. When this valve doesn’t close properly or opens too often, acid from the stomach can flow back into the oesophagus, causing heartburn and other symptoms of gastro-oesophageal reflux.

Gastro-oesophageal reflux disease (GORD) occurs when there is repeated reflux (leakage) of stomach acid into the oesophagus. The oesophagus can become inflamed when it is exposed to stomach acid for long periods. If left untreated, persistent GORD can cause damage to the lining of the oesophagus.

Symptoms of GORD

Typical symptoms of GORD include:

- Heartburn – a burning sensation that usually begins in the stomach or lower chest and moves upwards behind the breastbone towards the neck or throat. It is often triggered by meals or bending, straining or lying down.
- Regurgitation – the backward flow and return of swallowed food into the mouth. Sometimes it can be mistaken for vomiting.
- Waterbrash – excess saliva in the mouth.
Gastro-oesophageal reflux disease

GORD can cause a number of other symptoms including burping, nausea, loss of appetite, hoarse voice, dry cough (especially at night) and sore throat. These symptoms often occur when stomach acid moves up beyond the oesophagus and into the throat. It can be difficult to know whether these symptoms are due to GORD or another medical condition.

Cells that line the stomach produce mucus which protects the stomach from damage by digestive chemicals and stomach acid. The cells lining the oesophagus are different and have little protection from acid. When the oesophagus is exposed to stomach acid continuously, the lining of the oesophagus becomes inflamed. This is called oesophagitis. Severe and persistent inflammation can cause scarring and narrowing (a stricture) of the lower oesophagus, although this is uncommon. Symptoms associated with oesophagitis include painful swallowing, a feeling of choking at night, and vomiting with bright red blood. Continued exposure to stomach acid can also increase the risk of developing cancer of the oesophagus. People with a family history of stomach (gastric) cancer and those aged 55 years and older are at increased risk. Cancer of the oesophagus can cause symptoms of oesophagitis, as well as unexplained weight loss.

The following symptoms are considered ‘alarm’ symptoms that always require referral to the pharmacist:

- difficult or painful swallowing
- abdominal pain
- persistent cough
- unexplained weight loss
- dark, sticky or tarry bowel motions
- vomiting, especially blood in the vomit or material that looks like coffee grounds
- chest pain that gets worse with or after exercise, or goes into the chin or left shoulder.

What causes gastro-oesophageal reflux?

Gastro-oesophageal reflux can be caused by increased pressure in the stomach which is too high for the lower oesophageal sphincter to withstand. Common causes include pregnancy, eating a large meal or being overweight. Reflux can also be caused by foods and other chemicals which relax the sphincter such as cigarette smoking, caffeine or alcohol consumption. People with hiatus hernia, a condition where part of the stomach pushes through the abdominal wall into the lower chest, can also develop reflux.

Trigger factors

There are certain triggers that may cause or worsen heartburn and other symptoms of gastro-oesophageal reflux. These include:

- certain types of foods e.g. spicy foods, onions, fried or fatty foods, peppermint or mints, chocolate, tomato-based foods, citrus fruits, caffeine
- large meals or overeating
- eating quickly and lying down too soon after eating
- stress
- alcohol
- smoking
- pregnancy
- bending and straining
- overweight or obesity
- certain medical conditions
- certain medicines – e.g. non-steroidal anti-inflammatory drugs (NSAIDs).

Managing GORD

Medicines for treating GORD

Gastro-oesophageal reflux is common and most people have heartburn occasionally. However, almost one in five adults experience heartburn at least once a week. Often symptoms are frequent or severe enough to become troublesome and affect quality of life. As pharmacy assistants, you may be asked to assist customers to choose a medicine to treat heartburn. You can play an important role by recommending an appropriate treatment or referring the customer to a pharmacist for further advice. There are several different types of medicines which can be recommended for short-term relief of reflux symptoms. Long-term management of GORD requires medical supervision.

Antacids

Antacid ingredients include aluminium hydroxide, magnesium salts, calcium carbonate and sodium bicarbonate. Antacids work by neutralising stomach acid and provide quick relief from heartburn and other reflux symptoms.

People often purchase antacid preparations to self-treat their reflux symptoms. Antacids are suitable for occasional symptoms and may be used ‘as needed’ for mild heartburn that is experienced once a week or less frequently. They are not suitable for long term use without medical advice.

Antacids are available as chewable tablets or liquid formulations. They are best taken 1–3 hours after meals. Most preparations contain a combination of different ingredients. This helps to reduce the side effects caused by individual ingredients (e.g. when used in combination, the constipating effects of aluminium are offset by the laxative effects of magnesium). Sodium-containing antacids need to be avoided in people with high blood pressure, heart failure, and kidney disease. All antacids may be used in pregnancy. Other ingredients such as alginate or simethicone are also found in some antacid preparations. Alginates form a ‘raft’ or coating on the surface of the stomach contents which stops it leaking into the oesophagus.
Simethicone helps to reduce flatulence (wind). Antacids can interfere with the absorption of some other medicines and should generally be taken at least two hours away from other medicines. People with other medical conditions or who take other medicines should always be referred to the pharmacist.

**Histamine H2-receptor antagonists**
These include famotidine (Pepzan) and ranitidine (Gavilast, Zantac). H2-antagonists reduce (suppress) acid production in the stomach. They have a slower onset but provide longer lasting relief than antacids and can be dosed once or twice a day. They are useful for mild, occasional reflux symptoms that occur once per week or less frequently.

They can be taken ‘as needed’ to relieve reflux symptoms when they occur, or 30–60 minutes before meals to prevent symptoms that usually occur after eating. All H2-antagonists have similar effectiveness and there is no benefit in taking more than the recommended dose. They are generally well tolerated with few side effects. Some H2-antagonists (e.g. famotidine, ranitidine) can be purchased in small quantities from a pharmacy without a prescription and may be recommended for short-term relief of reflux symptoms in adults and children over 12 years of age. These medicines may be used in pregnancy but antacids should be trialled first. If a customer needs to take a H2-antagonist regularly to control reflux symptoms, they should be referred to a pharmacist.

**Proton pump inhibitors**
These medicines include omeprazole (Acimax, Losec) and pantoprazole (Somac, Suvacid). Proton pump inhibitors (PPIs) work by reducing the amount of acid the stomach produces. They reduce inflammation in the oesophagus and help to heal gastric ulcers (ulcers in the stomach) or duodenal ulcers (ulcers in the duodenum – a part of the intestine that leads out of the stomach). PPIs are the preferred treatment for frequent or severe symptoms of GORD.

Some people need to take PPIs long term. A condition associated with long-standing reflux known as Barrett’s syndrome causes cells that line the oesophagus to change and become more prone to becoming cancerous. About one or two in 100 people with Barrett’s syndrome develop cancer of the oesophagus and long-term PPI therapy is necessary to suppress acid production and prevent exposure of the oesophagus to stomach acid.

PPIs are generally well tolerated. Some people can experience headache, nausea, vomiting, diarrhoea, abdominal pain, wind or constipation. More serious side effects such as kidney problems are rare. PPIs are formulated with a special coating (an ‘enteric’ coating) to protect the medicine from being destroyed by acid in the stomach. They are available as enteric-coated tablets or capsules containing enteric-coated pellets which must be swallowed whole and not crushed or chewed. PPIs are very effective, but can take several days to relieve symptoms effectively. Antacids may be used initially in combination with a PPI for rapid symptom relief. PPIs are available in low doses as Pharmacist-Only medicines.

A two-week course may be recommended by a pharmacist for people who experience reflux symptoms two or more times a week but less than daily. PPIs are best taken 30–60 minutes before a meal (e.g. before breakfast if symptoms mainly occur during the day or before the evening meal if symptoms are worse at night).
People with persistent reflux symptoms or symptoms that return after a two week course of a low dose PPI should be referred to a pharmacist.

**Lifestyle modifications**

Customers should be advised to try and avoid things that make their symptoms worse such as certain foods, smoking and alcohol. Changes to diet and lifestyle that may help to reduce or prevent reflux symptoms include:

- avoid foods known to worsen heartburn where possible
- limit caffeine and alcohol intake
- avoid large meals, especially close to bedtime
- avoid lying down shortly after meals
- avoid wearing tight-fitting garments after meals
- raise the bed-head or use a wedge pillow if symptoms are worse at night when lying down

- achieve and maintain a healthy weight
- quit smoking
- bend from the knees (not the spine)
- exercise regularly.

**Follow-up advice**

People should be advised to return to speak to a pharmacist or their doctor if:

- they develop any alarm symptoms
- the treatment does not adequately relieve their symptoms
- regular treatment is required to relieve their symptoms.

Refer to the *Heartburn and Indigestion* Fact Card for more information about the management of heartburn, and ways to reduce or prevent gastro-oesophageal reflux symptoms.

**Table 1. When to refer**

<table>
<thead>
<tr>
<th>The following customers should be referred to the pharmacist.</th>
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<tr>
<td>Children aged &lt;18 years.</td>
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<td>Adults over 50 years of age with new or worsening symptoms.</td>
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<td>Women who are pregnant or breastfeeding.</td>
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<td>Adults who are taking other medicines or have other medical conditions.</td>
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<tr>
<td>Adults with persistent reflux symptoms occurring on two or more days per week.</td>
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<tr>
<td>Adults who have used a treatment for two weeks but continue to have symptoms.</td>
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</table>

**New qualifications for staff in community pharmacies have been endorsed and will be available shortly.**

Pharmacy assistants and pharmacy dispensary technicians will be able to update their qualifications by undertaking recognition of prior learning and a bridging course.

Take the opportunity to remain up to date and to gain the new skills and knowledge contained in these new qualifications.

For further information contact your local branch or visit [www.psa.org.au](http://www.psa.org.au)
Assessment questions for the pharmacy assistant

Select one correct answer from each of the following questions.

**Answers due 31 October 2012.**

Before undertaking this assessment, you need to have read the Counter Connection article, and the associated Fact Cards. Photocopy and/or use the answer sheet provided. Make sure to include your ID number.

<table>
<thead>
<tr>
<th>Question</th>
<th>Option A</th>
<th>Option B</th>
<th>Option C</th>
<th>Option D</th>
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<tbody>
<tr>
<td>1. Heartburn is:</td>
<td>a. Chest pain that typically moves into the chin or left shoulder.</td>
<td>b. A burning feeling rising from the stomach or lower chest towards the throat.</td>
<td>c. Backward flow and return of swallowed food into the mouth.</td>
<td>d. All of the above.</td>
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<td>5. Choose the INCORRECT statement.</td>
<td>a. H2-antagonists can be used for mild symptoms that occur once per week or less frequently.</td>
<td>b. Aluminium tends to cause diarrhoea while magnesium causes constipation.</td>
<td>c. Antacids may be used initially in combination with a PPI for rapid symptom relief.</td>
<td>d. PPIs are the preferred treatment for frequent or severe symptoms of GORD.</td>
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<td>6. Which of the following lifestyle changes may help to reduce or prevent reflux symptoms?</td>
<td>a. Limit caffeine and alcohol intake.</td>
<td>b. Eat large meals close to bedtime.</td>
<td>c. Avoid exercise.</td>
<td>d. Lie down shortly after meals.</td>
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</tbody>
</table>

Submit answers online

To submit your response to these questions online, go to the PSA website: www.psa.org.au/selfcare