

# THE PROFESSIONAL ASSISTANT LEARN & ADVISE



MODULE 6: OCTOBER 2015

## Indigestion and heartburn

**Mouth:** digestion starts the moment food is eaten, due to the mechanical action of chewing. At the same time, salivary glands release saliva, which contains an enzyme called salivary amylase and this helps break down starch, making food easier to swallow.

**Oesophagus:** after swallowing, food passes into the oesophagus and travels downwards, aided by waves of muscular contractions called peristalsis. At the end of the oesophagus is a ring of muscle called the lower oesophageal sphincter that marks the opening to the stomach.

To understand why indigestion and heartburn cause the symptoms and discomfort they do, it is important to know a little about the upper gastrointestinal (GI) tract, which is comprised of the mouth, oesophagus, the stomach and the duodenum.

**Stomach:** once food enters this organ, it continues to be broken down, this time because of the action of gastric juices. The main components are acid and pepsin, although these are mixed with mucus to protect the lining of the stomach.

**Duodenum:** after one to two hours, the food that has been eaten has been turned into a thick liquid called chyme. The pyloric valve of the stomach opens and allows the chyme into the duodenum, where it mixes with more digestive enzymes, this time from the pancreas, and bile made by the liver. This mixture passes into the small intestine, where most of the nutrients are absorbed into the body.



### OBJECTIVES

After studying this module, assistants will:

- Understand how and why indigestion and heartburn occur
- Recognise the symptoms of indigestion and heartburn, and know when to refer
- Know the treatment options available, including lifestyle measures that may help.



This module is suitable for all members of the pharmacy team who wish to increase their knowledge of common conditions, treatment options and communication skills. This module has been endorsed with the NPA's Training Seal as suitable for use by pharmacy teams as part of their ongoing learning. This module can also form part of your Team Tuesday training.



### **DID YOU KNOW?**

Recurring indigestion can be a symptom of a more serious problem, such as a stomach ulcer.

# Understanding the problem

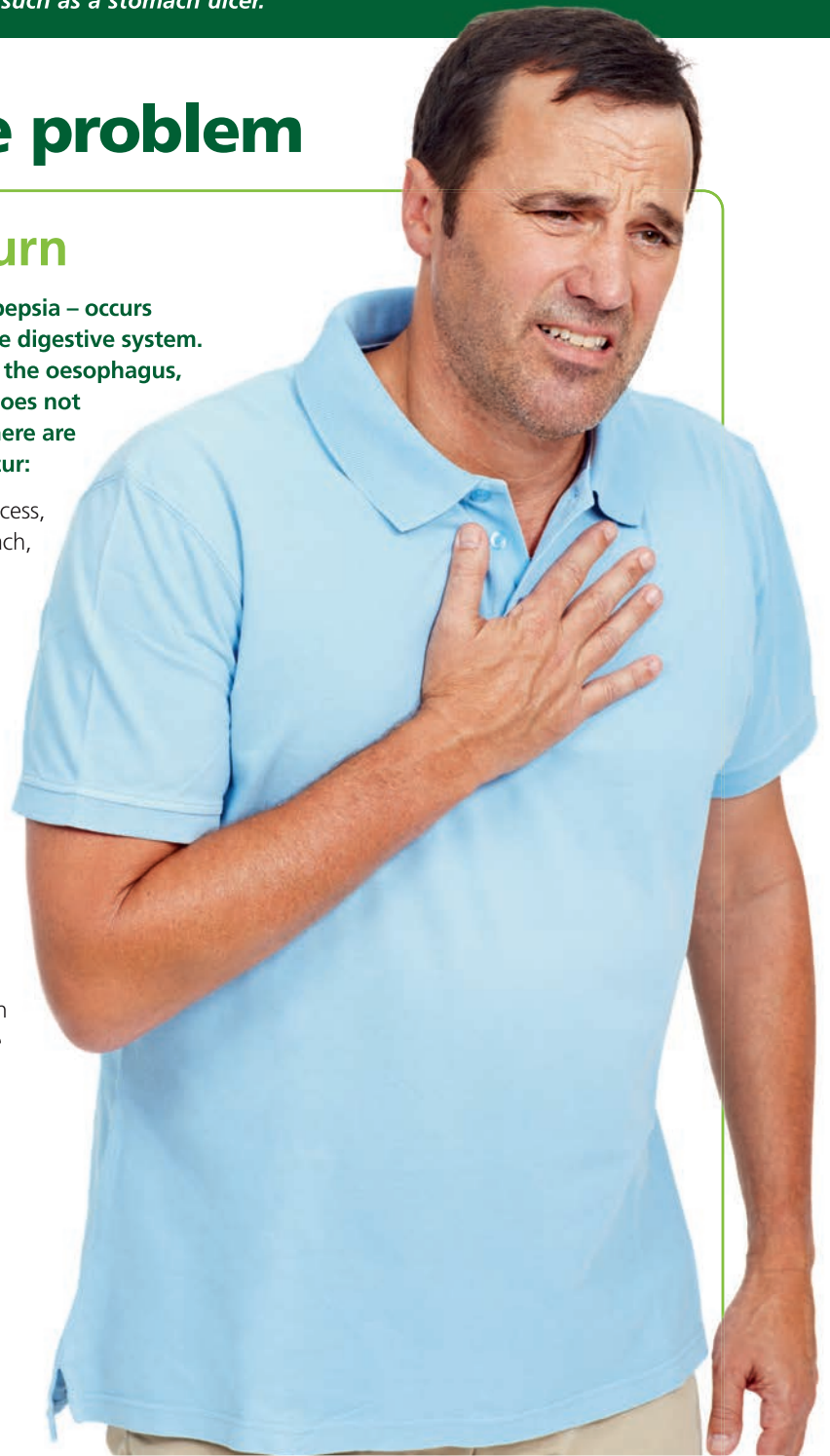
## Indigestion and heartburn

**Indigestion** – usually referred to by doctors as **dyspepsia** – occurs when acid comes into contact with the lining of the digestive system. **Heartburn** is caused when acid leaks upwards into the oesophagus, which is uncomfortable because the oesophagus does not have the same protective lining as the stomach. There are many reasons why these two conditions might occur:

- Pregnancy hormones can slow down the digestive process, plus the growing baby often puts pressure on the stomach, pushing the contents upwards
- Weakness of the lower oesophageal sphincter, which normally keeps the contents of the stomach where they're meant to be, and is the cause of gastro-oesophageal reflux disease (GORD). This also happens in hiatus hernia, when part of the stomach pushes through the diaphragm of the chest
- Lifestyle factors play a significant role. Being overweight, drinking alcohol, smoking, stress and anxiety can all cause symptoms, as can having a poor diet, either because of the type of food that is being eaten (e.g. fatty foods) or the speed with which it is being consumed
- Some medicines can cause indigestion as a side effect. The most common culprits are NSAIDs such as ibuprofen and aspirin, but many drugs list indigestion as a possible adverse reaction in their patient information leaflets
- Ulcers are erosions of the lining of the stomach or duodenum, which may occur following an infection with the *Helicobacter pylori* bacteria.

In many cases, more than one factor will be at play. For example, someone may be overweight as a result of frequently eating meals with a high fat content, which in turn has caused them to develop GORD.

Symptoms differ from person to person, but discomfort is usually a feature. If this is experienced in the chest, it is referred to as heartburn, whereas pain slightly lower down may be referred to as indigestion. It is worth checking what customers mean when they use these terms, as they mean different things to different people. Other symptoms may include nausea, feeling bloated or full, belching and bringing up food into the oesophagus (regurgitation).



### When to refer

**There are certain symptoms that should ring alarm bells. Get your pharmacist involved if a customer reports any of the following:**

- Continual indigestion symptoms for the first time if they are aged over 55 years
- Severe, constant or worsening pain
- Blood-stained vomit
- Pain radiating down the arm or into the back
- Unexpected weight loss
- Difficulty swallowing or breathing
- Symptoms experienced by children
- Heartburn or indigestion that has not responded to OTC remedies.



### **DID YOU KNOW?**

Tomatoes, coffee and spicy or fatty foods can all cause heartburn.

# Treatment options

OTC remedies generally fall into two categories: products that neutralise excess acid (antacids), and those that reduce acid production (proton pump inhibitors and H2 antagonists). However, for someone who only suffers mild and occasional indigestion or heartburn, lifestyle changes may be enough to relieve symptoms and prevent future recurrences.

## 1 Lifestyle changes

Remember to be tactful when offering advice on combating indigestion, particularly if the root cause is likely to be some form of overindulgence.

- Try to identify and then avoid triggers. Keeping a diary may help
- Limit fried food, caffeine and alcohol
- Eat regular meals at a sensible pace
- Cut back smoking – ideally looking to give up altogether
- Lose weight if necessary
- Exercise regularly to improve muscle tone
- Symptoms that occur at night may lessen if the last meal of the day is eaten earlier. Propping up the head and shoulders while in bed, for example by using an extra pillow, can also help
- Relaxation techniques such as yoga and meditation can ease any stress
- If medication might be an issue, discuss changing how it is taken or the drug itself with a pharmacist or doctor. For example, taking some medicines after food lessens the chance of them irritating the stomach.



## 2 Antacids and alginates

Antacid remedies often contain several different ingredients and are generally considered first line treatment, after or alongside lifestyle changes. Aluminium and magnesium salts frequently form the base of these products, sometimes in combination so the respective side effects of constipation and diarrhoea cancel each other out. Antacids can react with other medicines, so make sure to ask customers if they are taking anything else when recommending or selling such products.

Alginates, sometimes called rafting agents, often feature for their ability to form a layer that sits above the stomach contents and stops it leaking into the oesophagus.

Liquids have a quicker effect than tablets (which should always be sucked or chewed rather than swallowed), and all products are best taken about an hour after eating, rather than immediately. Some products will contain both an alginate and an antacid (e.g. Gaviscon Double Action).

OTC examples include Gaviscon Advance, Bisodol, Rennie.

## 3 Proton pump inhibitors and H2 antagonists

If antacids haven't resolved the symptoms, an acid-reducing agent may help.

The proton pump inhibitors (PPIs) omeprazole, esomeprazole and pantoprazole block acid release in the stomach. They are effective and start to suppress acid production within one to two hours of taking the first dose, but two to three days' treatment may be needed for the full benefit to be felt. OTC examples include Pantoloc Control, Zanolprol Tablets and Nexium Control.

H2 antagonists such as famotidine and ranitidine reduce stomach acid production and give up to 12 hours relief. They can be taken as soon as symptoms start and can be used as a preventative measure – for example, if someone is going for dinner and knows that they will be eating rich food, which is likely to cause symptoms. OTC examples include Pepcid Two and Zantac 75 Relief.

All OTC acid-reducing medicines should only be used for a few days at a time, and there are various restrictions regarding their sale. Check packs carefully when recommending or selling these products to customers.



### **SIGNPOSTING**

For more information, you can:

- Use your Counter Intelligence Plus training guide
- Visit NHS Choices: [www.nhs.uk/conditions/indigestion](http://www.nhs.uk/conditions/indigestion)
- Look at information provided by the charity Core: [www.corecharity.org.uk/conditions/indigestion](http://www.corecharity.org.uk/conditions/indigestion)

# TEST YOURSELF ONLINE

GOOD PRACTICE KNOWLEDGE IS IMPORTANT WHEN ADVISING CUSTOMERS



## Questions

- 1) In which part of the upper GI tract does pepsin start breaking down food?**
  - a) The mouth
  - b) The oesophagus
  - c) The stomach
  - d) The duodenum
- 2) Which statement is FALSE?**
  - a) Both obesity and pregnancy can be causes of indigestion
  - b) Pregnancy hormones can speed up the digestive process
  - c) Hiatus hernia can cause the lower oesophageal sphincter to weaken
  - d) NSAIDs list indigestion as a side effect
- 3) Which of the following customers would NOT require referral?**
  - a) A 21-year-old man complaining of heartburn
  - b) A pregnant woman with indigestion symptoms for the first time
  - c) A 45-year-old woman buying an OTC indigestion remedy who makes a joke that her indigestion is causing her to lose weight
  - d) A 55-year-old man asking for a stronger remedy than usual as he is experiencing pain in his back as well as chest
- 4) Which of the following is NOT a usual symptom of indigestion or heartburn?**
  - a) Discomfort after eating
  - b) Feeling bloated
  - c) A burning sensation in the oesophagus
  - d) Blood flecked vomit
- 5) Which ingredient works by reducing acid production?**
  - a) Famotidine
  - b) Aluminium salts
  - c) Magnesium salts
  - d) Sodium alginate
- 6) Which piece of advice would be most applicable to someone looking to ease indigestion symptoms that flare up when they go to bed at night?**
  - a) Eat as short a time as possible before going to bed
  - b) Use an extra pillow at night
  - c) Take a PPI before bed
  - d) Have a cigarette last thing at night



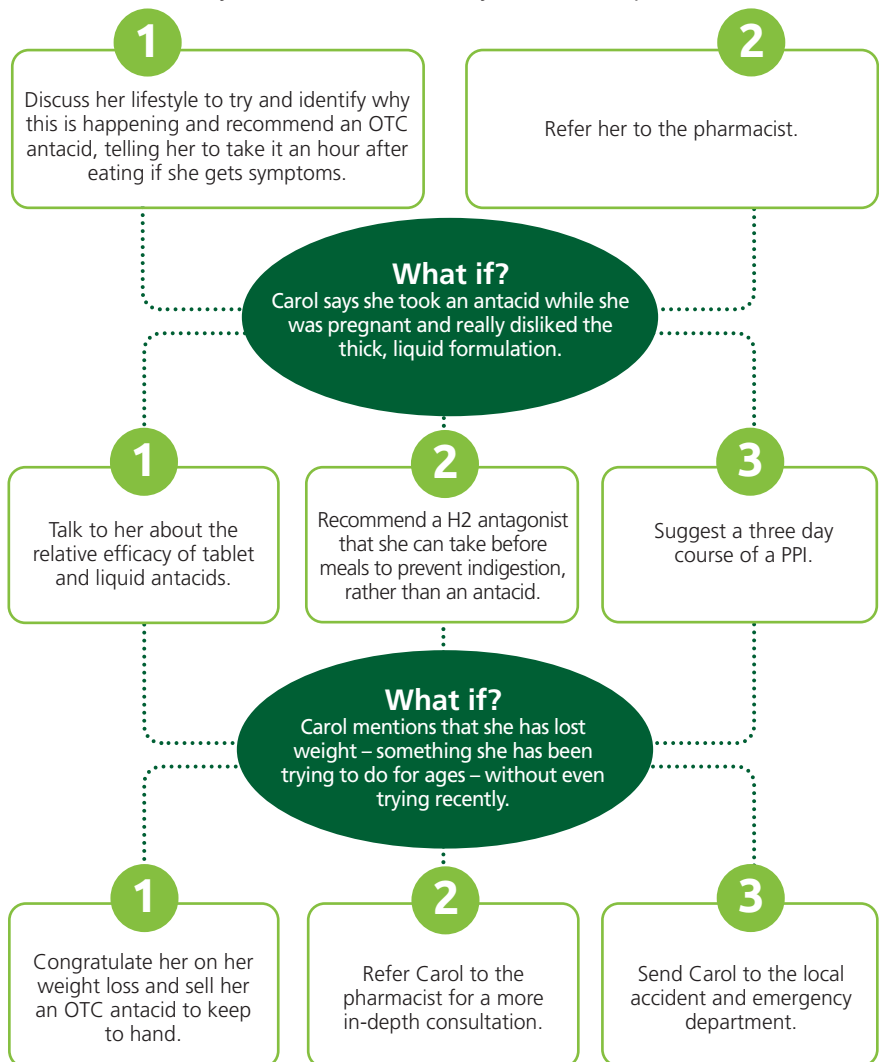
## Scenario

Carol, a busy mum of two, says that she occasionally suffers from indigestion after eating. She is otherwise fit and healthy and doesn't take any medication.



## What would you recommend?

For each part of this scenario, think about the decision you would make and, importantly, why you would choose that option. In addition, for each decision that you make, think about how you would talk to the customer and provide the necessary advice. Discuss this with your team and pharmacist.



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## ADVERTORIAL FEATURE

# Gaviscon Double Action<sup>®\*</sup>: (sodium alginate, calcium carbonate, sodium bicarbonate)

## Reducing the burden of heartburn and indigestion

**Heartburn and indigestion symptoms affect up to a quarter of the population every month<sup>1</sup> and, with up to 97% of people seeking relief with OTC medication,<sup>2</sup> the pharmacy has an important role in helping customers control their symptoms.<sup>3,4</sup>**

Heartburn and indigestion are caused by stomach contents refluxing into the oesophagus.<sup>5</sup> The pain and discomfort that results can impact the daily lives of patients:

- Symptoms can limit physical activity and reduce the ability to concentrate<sup>6</sup>
- Sleep disturbance is reported by around half of those with reflux symptoms<sup>2</sup>
- 41% of adults with night-time heartburn believe it interferes with work the next day<sup>7</sup>

### Rapid relief, on demand

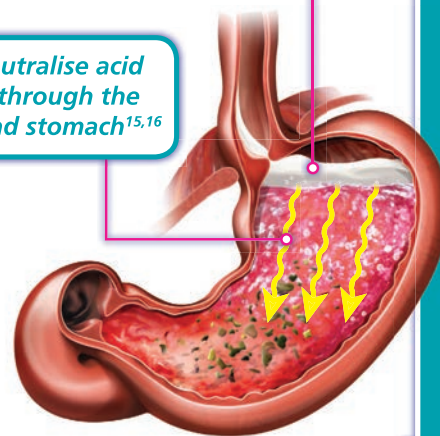
Pain is the number one driver for self-treatment.<sup>6</sup> When reflux causes pain and discomfort after meals, waking up at night, or the inability to function at work, **rapid relief** is what's required.

Alginates and antacids are the treatment options with the fastest onset of action.<sup>8</sup> Powerful acid suppressants, like PPIs, have a systemic mode of action, which take around 5 days to reach maximum effect<sup>9</sup> and, even then, night-time symptoms can be a problem.<sup>10</sup> Up to 45% of patients taking prescription PPIs report residual reflux symptoms.<sup>11</sup> PPIs reduce the acidity

of reflux, but the frequency of reflux events is unchanged and hypersensitivity of the oesophagus to weakly acidic reflux can cause persistent symptoms.<sup>12</sup>

**ALGINATES form a neutralising raft that floats on top of stomach contents and provides a physical barrier to reflux<sup>8,13</sup> for 4 hours<sup>14</sup>**

**ANTACIDS neutralise acid as they pass through the oesophagus and stomach<sup>15,16</sup>**



**GAVISCON DOUBLE ACTION\* is a combination of the two – an alginate-antacid that provides instant action<sup>17</sup> against the symptoms of heartburn and indigestion<sup>18</sup>**



So the next time you encounter a patient with heartburn and indigestion symptoms, think about your options...

**Gaviscon Double Action can provide the rapid relief your patient is looking for**

\*Gaviscon Double Action refers to Gaviscon Double Action Mint and Gaviscon Double Action Liquid Sachets

**Gaviscon Double Action Mint, Gaviscon Double Action Liquid Sachets (Liquids):** Each 10ml contains sodium alginate 500mg, sodium bicarbonate 213mg and calcium carbonate 325mg. Also contains methyl and propyl hydroxybenzoates and sodium saccharin. **Gaviscon Double Action Tablets, Gaviscon Double Action Mint Flavour Chewable Tablets (Tablets):** Each tablet contains sodium alginate 250mg, sodium bicarbonate 106.5mg and calcium carbonate 187.5mg. Also contains mannitol, aspartame and xylitol. **INDICATIONS:** Treatment of symptoms of gastro-oesophageal reflux such as acid regurgitation, heartburn and indigestion, for example, following meals or during pregnancy, and for symptoms of excess stomach acid (hyperacidity). **DOSEAGE INSTRUCTIONS:** For oral administration. Children under 12 years: Should be given only on medical advice. Elderly: No dose modifications necessary for this age group. Liquids: Adults and children 12 yrs and over: 10-20ml after meals and at bedtime, up to 4 times per day. Tablets: Adults and children 12 yrs and over: 2-4 tablets after meals and at bedtime, up to 4 times per day. **CONTRAINDICATIONS:** Hypersensitivity to any of the ingredients. For liquids, this includes the esters of hydroxybenzoates (parabens). **PRECAUTIONS AND WARNINGS:** Care needs to be taken in treating patients with hypercalcaemia, nephrocalcinosis and recurrent calcium containing renal calculi. Treatment of children younger than 12 years of age is not generally recommended, except on medical advice. If symptoms do not improve after 7 days, the clinical situation should be reviewed. Due to the presence of calcium carbonate which acts as an antacid, a time-interval of 2 hours should be considered between Gaviscon intake and the administration of other medicinal products, especially H2-antihistaminics tetracyclines, digoxine, fluoroquinolone, iron salt, ketoconazole, neuroleptics, thyroxine, penicillamine, beta-blockers (atenolol, metoprolol, propranolol), glucocorticoid, chloroquine, and diphosphonates. Liquid: Each 10ml dose has a sodium content of 127.25mg (5.53mmol). Tablets: The sodium

content of a two-tablet dose is 110.75mg (4.82 mmol). This should be taken into account when a highly restricted salt diet is recommended, e.g. in some cases of congestive cardiac failure and renal impairment. Liquid: Each 10ml dose contains 130mg (3.25 mmol) of calcium. Tablets: Each two-tablet dose contains 150mg (3.75 mmol) of calcium. Care needs to be taken in treating patients with hypercalcaemia, nephrocalcinosis and recurrent calcium containing renal calculi. Tablets: Due to its aspartame content this product should not be given to patients with phenylketonuria. **PREGNANCY AND LACTATION:** Open controlled studies in 281 pregnant women did not demonstrate any significant adverse effects of Gaviscon on the course of pregnancy or on the health of the foetus/new-born child. Based on this and previous experience the medicinal product may be used during pregnancy and lactation. Care should be taken when recommending medicines for use in pregnancy as medicines can cross the placenta and may affect the foetus. **SIDE-EFFECTS:** Very rarely (<1/10,000) patients sensitive to the ingredients may develop allergic manifestations such as urticaria or bronchospasm, anaphylactic or anaphylactoid reactions. Ingestion of large quantities of calcium carbonate may cause alkalosis, hypercalcaemia, acid rebound, milk alkali syndrome or constipation. These usually occur following larger than recommended dosages. **RETAIL PRICE:** Gaviscon Double Action Sachets (12 x 10ml) - £4.99; Gaviscon Double Action Mint Flavour Chewable Tablets 12s - £2.99; Gaviscon Double Action Mint (150ml) - £4.79; Gaviscon Double Action Tablets 16s - £3.39. **MARKETING AUTHORISATION:** Gaviscon Double Action Liquid Sachets PL00063/0524, Gaviscon Double Action Mint Flavour Chewable Tablets PL00063/0525, Gaviscon Double Action Mint PL00063/0552, Gaviscon Double Action Tablets PL00063/0157. **SUPPLY CLASSIFICATION:** GSL. **HOLDER OF MARKETING AUTHORISATION:** Reckitt Benckiser Healthcare (UK) Limited, Hull HU8 7DS. **DATE OF PREPARATION:** July 2014

Adverse events should be reported. Reporting forms and information can be found at [www.mhra.gov.uk/yellowcard](http://www.mhra.gov.uk/yellowcard). Adverse events should also be reported to Reckitt Benckiser Healthcare (UK) Ltd on: 0500 455 456.

**References:** 1. Moayyedi P, Axon ATR. *Aliment Pharmacol Ther.* 2005;22(Suppl. 1):11-19. 2. Jones R, Liker HR, Ducroté P. *Int J Clin Pract.* 2007;61(8):1301-1307. 3. Krishnan HS, Shaefer M. *Pharm World Sci.* 2000;22(3):102-108. 4. NICE. Dyspepsia and gastro-oesophageal reflux disease. Clinical Guideline (update). 2014. 5. Kahnilas PJ. *Cleve Clin J Med.* 2003;70(Suppl. 5):S4-S19. 6. Liker H, Hungin P, Wiklund L. *J Am Board Fam Pract.* 2005;18(5):393-400. 7. Shaker R, Castell DO, Schoenfeld SF, et al. *Am J Gastroenterol.* 2003;98(7):1487-1493. 8. Mandel KG, Daggy BP, Brodie DA, et al. *Aliment Pharmacol Ther.* 2000;14(6):669-690. 9. Andersson T, Röhss K, Bredberg E, et al. *Aliment Pharmacol Ther.* 2001;15:1563-1569. 10. Lowe RC. *GI Motility Online* 2006; doi:10.1038/gim054 (Epub ahead of print). 11. El-Serag H, Becher A, Jones R. *Aliment Pharmacol Ther.* 2010;32(6):720-737. 12. Sifrim D, Zerbib F. *Gut* 2012;61:1340-1354. 13. Sweis R, Kaufman E, Anggiansah A, et al. *Aliment Pharmacol Ther.* 2013;37(11):1093-1102. 14. Hampson FC, Jolliffe IG, Bakhtyari A, et al. *Drug Dev Ind Pharm.* 2010;36(5):614-623. 15. Robinson M, Rodriguez-Stanley S, Miner PB, et al. *Aliment Pharmacol Ther.* 2002;16:435-443. 16. Katz PO, Sachs G. *Pract Gastroenterol.* 2003;80-88. 17. Strugala V, Dettmar PW, Sarraat K, et al. *J Int Med Res.* 2010;38(2):449-457. 18. Reckitt Benckiser Healthcare (UK). Gaviscon Double Action Aniseed. Summary of Product Characteristics. Last revised 28/01/2011.