Managing reflux symptoms in the community pharmacy

Quick reference guide for pharmacists

2023

FIP Development Goals

International Pharmaceutical Federation

Colophon

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Foreword

From the president of the International Pharmaceutical Federation

Self-care is one of the major contributors to the sustainability of healthcare systems because it allows for a better distribution of healthcare resources and promotes the empowerment of individuals to make better health decisions and create better health outcomes.[1] Pharmacists and, in particular, colleagues working in the community can support healthcare systems by empowering patients through health education and the provision of services and products to support self-care.[2]

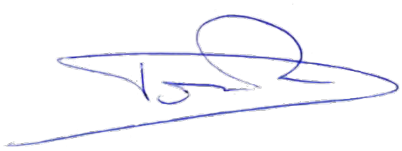
FIP's work on self-care aligns with FIP Development Goals 15 (People-centred care), 18 (Access to medicines, devices and services), and 21 (Sustainability in pharmacy). These goals focus on important aspects that self-care interventions in pharmacies unlock, such as access to medicines and services, in a sustainable way, always focusing on the patient's health and well-being.

In 2019, FIP and the Global Self-Care Federation published a joint policy statement highlighting the responsibilities of pharmacists in encouraging individuals to make proactive life choices. In 2022, FIP developed a comprehensive handbook on "Empowering self-care: A handbook for pharmacists", which includes both policy elements of self-care and practical guidance for pharmacists on key self-care topics. All the resources developed by FIP, including publications and events on self-care topics, can be found in the FIP prevention microsite, which has a section on self-care.

Reflux symptoms are commonly presented in community pharmacy and can be related to several lifestyle factors, including diet. It is important for pharmacists to consider these factors when interacting with patients and the public with such symptoms. Different non-prescription medicines are available to treat reflux symptoms, offering pharmacies as key points of access for trusted advice by the pharmacy team and access to self-care products which can provide relief to affected individuals.

As a pharmacist working for many years in the community, I am aware of the prevalence of these symptoms, and I hope you will find this publication useful for your work and easy to use. I trust this guidance will serve as a reminder of the importance of this topic and how, as pharmacists, we can effectively contribute to better health and more sustainable health systems.

FIP is proud to support the advancement of self-care globally and is committed to equip and empower pharmacy professionals and their organisations to deliver self-care interventions in the communities that they serve.



Dominique Jordan
FIP president

1 Introduction

Every day pharmacists empower patients to make better health choices and take better control of their own health.[3] Through this empowerment, individuals can take responsibility for managing common ailments and reducing the need for unnecessary visits to primary care facilities or emergency departments, and lessening the reliance on prescription-only medicines.[4]

Pharmacists contribute to universal health coverage (UHC) by supporting self-care through the provision of products and advice in their daily practice.[5] Due to the predicted shortage of 18 million healthcare workers worldwide by 2030, pharmacists will be essential healthcare workforce personnel who can provide health services in a cost-effective way.[6]

The World Health Organization (WHO) has developed several resources on self-care interventions and their classification.[7] Interventions include "evidence-based quality drugs, devices, diagnostics and/or digital technologies which can be provided fully or partially outside of formal health services and can be used with or without the support of a health worker".[7]

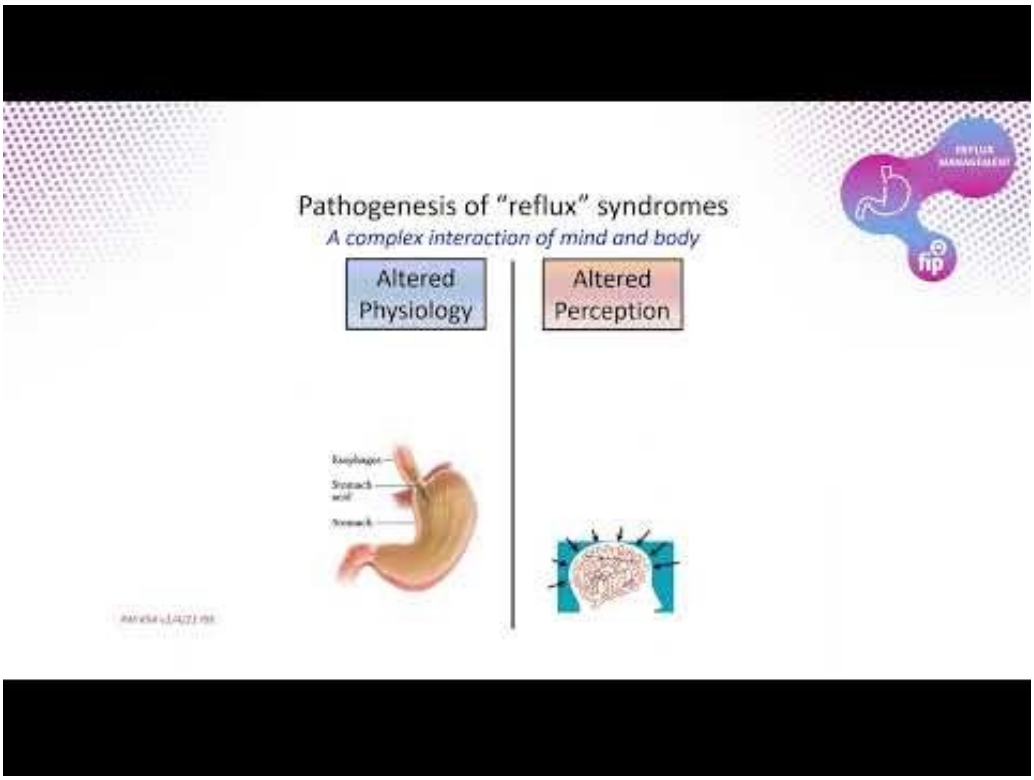
Pharmacists excel at providing self-care support interventions, supported by their wide geographical distribution and access to services and products at convenient times, perhaps even when other services are not available.[6] Pharmacists have the capacity to effectively educate patients and provide evidence-based advice on a broad range of topics, ranging from a sore throat to an episode of reflux.[8] (A similar quick guide on sore throat management was published in 2022 by FIP, entitled "Sore throat: Quick reference guide for pharmacists".)

Reflux symptoms are common in the community and are part of the daily practice of many pharmacists around the world. Such symptoms can be influenced by several lifestyle factors, including diet and body weight. It is important to consider modifications to risk factors and behaviours that can contribute to improving the occurrence, severity and magnitude of these symptoms.

Different non-prescription medicines are available to treat reflux symptoms, including antacids, alginates, proton pump inhibitors and H2 antagonists, among others, which makes pharmacies unique access points for trusted advice and medicines.

Nutritional advice is one of the fundamental pillars in the management of upper gastrointestinal disorders and was identified as an integral part of controlling reflux symptoms. Information and guidance for pharmacists on this topic are available in the FIP publication Nutrition and weight management services: A toolkit for pharmacists.

An overview of different pharmacological aspects and approaches to managing reflux symptoms can be found in the two short video presentations below by internationally renowned experts in this area: Prof. Peter Kahrilas (Northwestern University, USA) and Prof. Pali Hungin (Newcastle University, UK):



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This publication provides a quick review of guidance on reflux management by community pharmacists, expanding on the previous FIP publication "Empowering self-care: A handbook for pharmacists". An overview of the causes, symptoms and management options for reflux management will be detailed, including resources and highlighted information for the pharmacy team

2 Causes of reflux symptoms

Reflux symptoms are a common clinical presentation worldwide with approximately half of adults experiencing such symptoms at some point in their lives.[9] Risk factors for reflux disease include poor nutritional habits such as excessive consumption of fat, spices or irritant foods and drinks, being overweight, smoking, older age and physical inactivity, alongside some mental health conditions such as anxiety or depression (Figure 1).[10, 11]

Figure 1. Risk factors for the development of reflux symptoms

Bad nutritional habits can highly impact the development of reflux symptoms. Specific foods and drinks can irritate the oesophagus (such as acidic or spicy foods and drinks), increase gastric distention (such as carbonated drinks) or reduce the tone of the relaxation of the lower oesophageal sphincter (such as alcohol, coffee, chocolate or mint).[12] Specific nutritional behaviours, such as eating large meals close to going to sleep or having high calorific meals, can also increase the likelihood of developing reflux symptoms.[12]

Excess weight is associated with an increased frequency of gastroesophageal reflux[13] and is explained by different physiological mechanisms, such as increased abdominal pressure, mechanical changes in the gastroesophageal junction and altered metabolic functions from excess body fat.[14]

Smoking is an important risk factor that increases the occurrence of reflux symptoms. Tobacco smoke can reduce the production of saliva, which supports buffering and clearance of acid, and also lower oesophageal sphincter pressure, facilitating reflux.[15]

Medicines and supplements that can cause reflux symptoms include antibiotics, such as tetracyclines and clindamycin, bisphosphonates taken orally, iron and potassium supplements, quinidine and pain relievers, such as ibuprofen.[16]

Being of older age can increase the likelihood of reflux symptoms mostly due to physiological changes that happen with age: loss of muscle tonus and mass, weight gain and use of medicines, among others.[17]

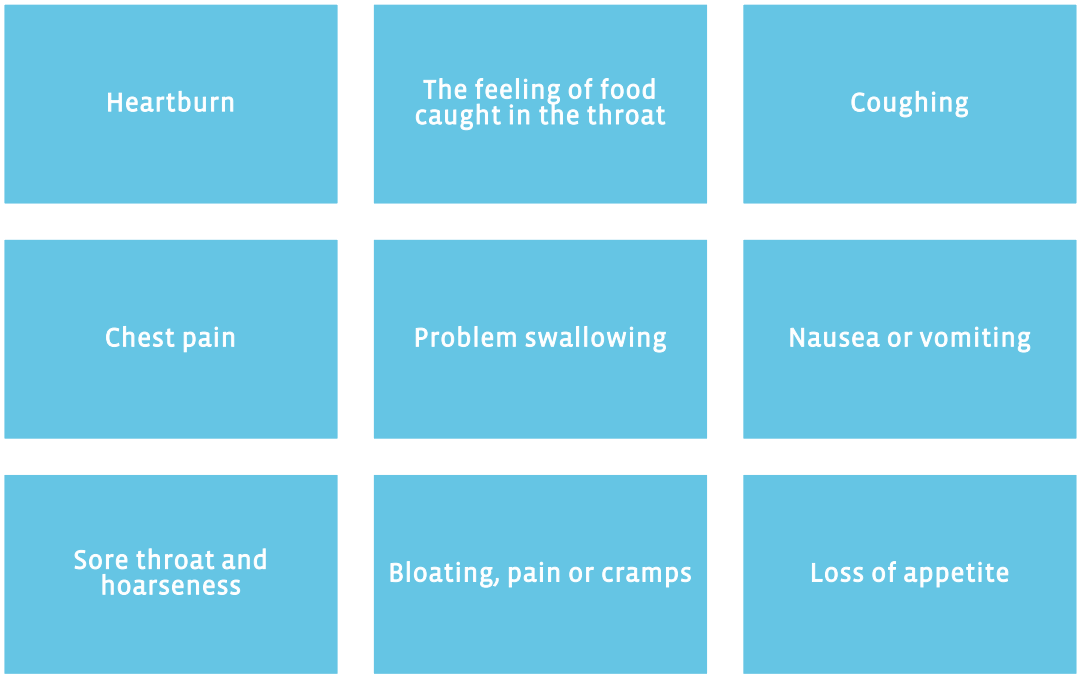
Physical inactivity can be an important factor for triggering or worsening reflux symptoms.[18] Physical activity can strengthen the diaphragm, thus possibly improving the function of the part of the reflux barrier supported by this muscle.[19]

Certain mental health factors may also contribute to developing reflux symptoms, because individuals with depression or anxiety may be more likely to experience upper gastrointestinal complaints.[20] This might be linked to lifestyle and nutritional habits of people living with these conditions that lead to worsening reflux symptoms and lower quality of life.[21]

3 Patients' experience of reflux symptoms

The most common symptoms associated with upper gastrointestinal complaints are abdominal discomfort (present in the form of bloating, pain or cramps), nausea or vomiting, acid reflux (heartburn), chest pain, difficulty in swallowing (dysphagia), regurgitation (food coming back into the mouth from the oesophagus) and loss of appetite due to the discomfort. Other related symptoms include coughing and a sore throat and hoarseness due to the presence of acid in the throat. Symptoms are summarised in Figure 2.[22, 23]

Figure 2. Common symptoms associated with reflux conditions



Red flag symptoms include the presence of blood in the gastrointestinal tract, persistent vomiting, progressive unintentional weight loss (up to 5% of the body normal weight over six to 12 months without an identifiable cause), chest pain, pain when swallowing (odynophagia) or severe difficulty in swallowing (dysphagia). Other factors that need referral for further evaluation include anaemia, any palpable masses in the gastrointestinal tract area and family history of upper gastrointestinal cancer (Figure 3).[24, 25]

Figure 3. Red-flag symptoms associated with reflux conditions

Red flag symptoms	Difficulty in swallowing (dysphagia)
	Pain in swallowing (odynophagia)
	Gastrointestinal bleeding
	Unintentional weight loss
	Recurrent or persistent vomiting
	Anaemia
	Palpable mass or lymphadenopathy
	Family history of upper gastrointestinal cancer

4 Triaging patients

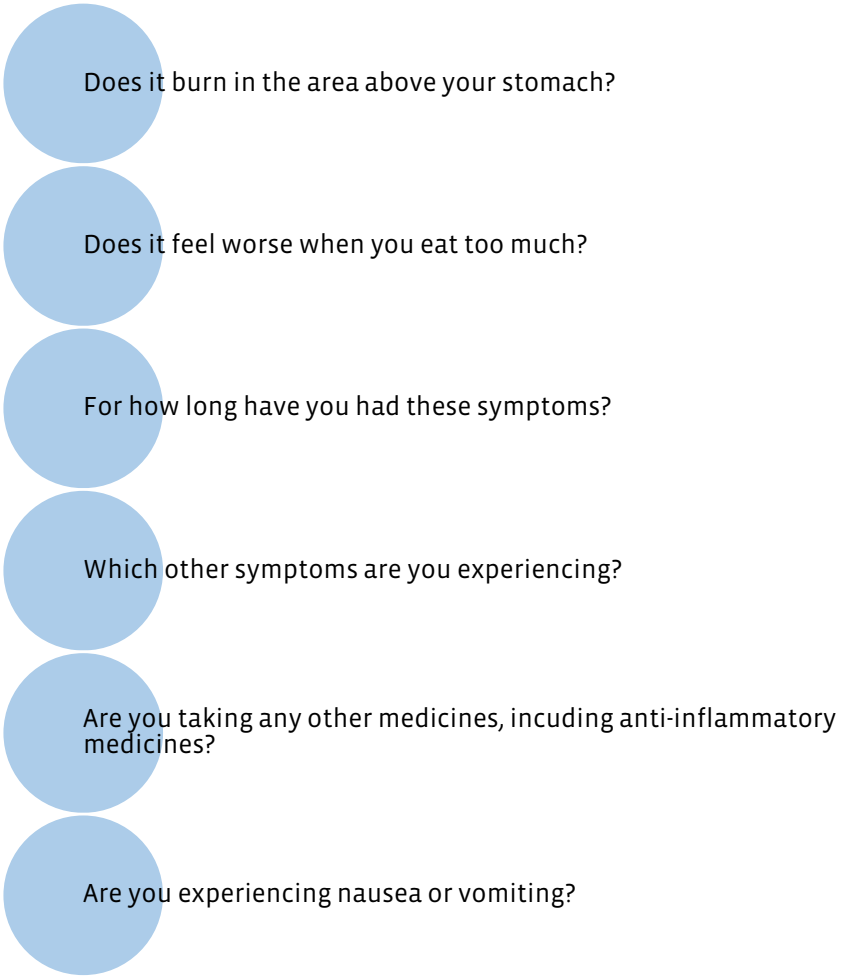
Pharmacists can support patients in making an accurate assessment of their condition by asking simple questions that characterise the frequency, nature and severity of symptoms. Symptoms should be assessed as described in Chapter 3, and referral to a medical doctor for further examination should always be considered in cases of red flag symptoms or complicated and recurrent cases.

Although most cases of upper gastrointestinal complaints might be of low severity, peptic ulcer disease is a complicated condition, especially if associated with *Helicobacter pylori*, which warrants extensive treatment with antibiotics.[26] Persistent complaints of reflux might indicate this cause, and pharmacists should consider referral for testing if this situation is encountered.

Considering the potential risk of complications and severe disease, thorough patient education and assessment are also important as patients might rely on the use of non-prescription medicines for extensive periods and refrain from seeking pharmacy or medical advice.[27]

Figure 4 outlines some examples of questions that can be used to understand the severity of reflux symptoms.[28]

Figure 4. Useful questions to assess reflux symptoms



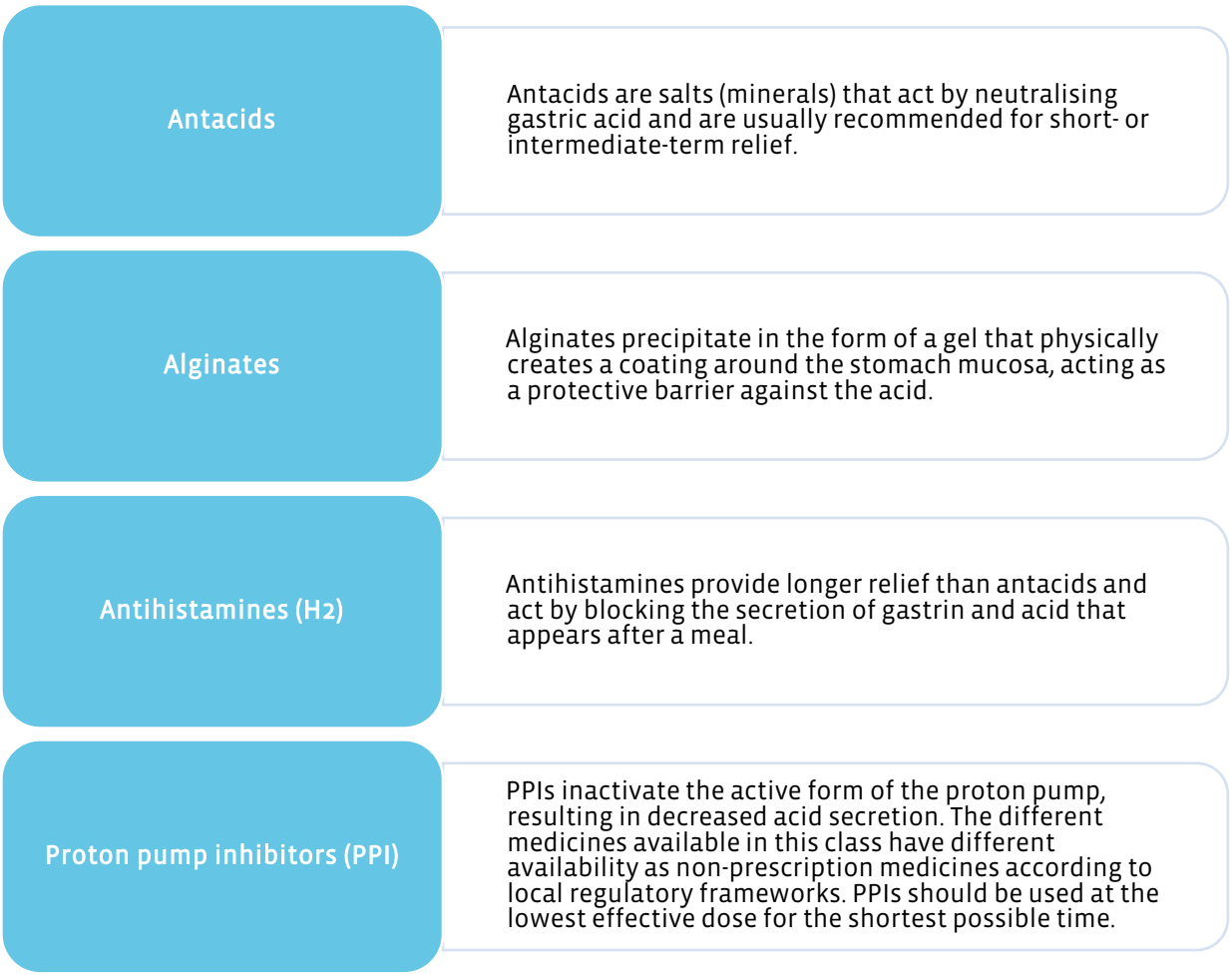
Besides these questions, a review of the patient's current medication regimen can be useful to ensure appropriate pharmacological management options (Chapter 5).[29] This can then be complemented with further recommendations on non-pharmacological options (Chapter 6).

5 Pharmacological management options for reflux symptoms

Pharmacists can provide effective solutions for reflux symptoms as they frequently interact with patients and, in some parts of the world, they have access to their medication data. Pharmacists should be aware that medicines used to relieve reflux symptoms can significantly alter the pH of the stomach, which may, in turn, interfere with the absorption of other medicines. Some of these medicines are available without a prescription in some countries and jurisdictions but may need a prescription in others.

Different pharmacological options exist for the treatment of reflux symptoms (Figure 5):[28, 30]

Figure 5. Options for the pharmacological treatment of reflux symptoms



For other related symptoms, such as nausea and vomiting, several agents exist, including ginger tablets and dimenhydrinate, or domperidone and metoclopramide, which may be available as prescription-only medicines in many countries across the globe.

The use of medicines listed in Figure 5 should be accompanied with educational advice on non-pharmacological and lifestyle options to support their effect. These medicines should be used during the presentation of the symptoms, and chronic use should only be considered following a medical prescription.

6 Non-pharmacological management and healthy lifestyles for reflux symptoms

Different non-pharmacological options can support the management of reflux symptoms because these are commonly associated with lifestyle factors (Figure 6).

It is important that patients avoid smoking and drinking excessive amounts of alcohol, and they should also avoid stress and excess weight. The wearing of comfortable clothes that are not restrictive or tight around the waist and chest may help relieve symptoms in some cases. Avoiding eating before exercising may help to reduce symptoms. Other tips include getting adequate sleep, waiting sufficient time between the final meal of the day and bedtime, and avoiding lying down immediately after eating.

Nutrition can play an important role in the prevention of reflux conditions. Avoiding food that is spicy, greasy or acidic, in addition to excessive caffeine or alcohol, can help maintain a neutral stomach pH.[12] Before going to bed at night it is important to limit the amount of food ingested. For patients with frequent gastrointestinal complaints, advice should be to eat smaller, more frequent meals to facilitate digestion and avoid the feeling of bloating. In cases of constipation, high fibre diets (at least 30g per day) are advised.

Lying on the left side may help reduce the movement of stomach acid towards the oesophagus. A similar strategy may be to recommend to patients that they raise the chest and head above their waist level while they are lying down.

Natural supplements containing digestive enzymes such as pancreatin or amylase, may be useful for certain individuals. Plant infusions, such as ginger or chamomile, may help with digestion.[31] Finally, the use of probiotics or oral rehydration solutions may be adequate for relief.

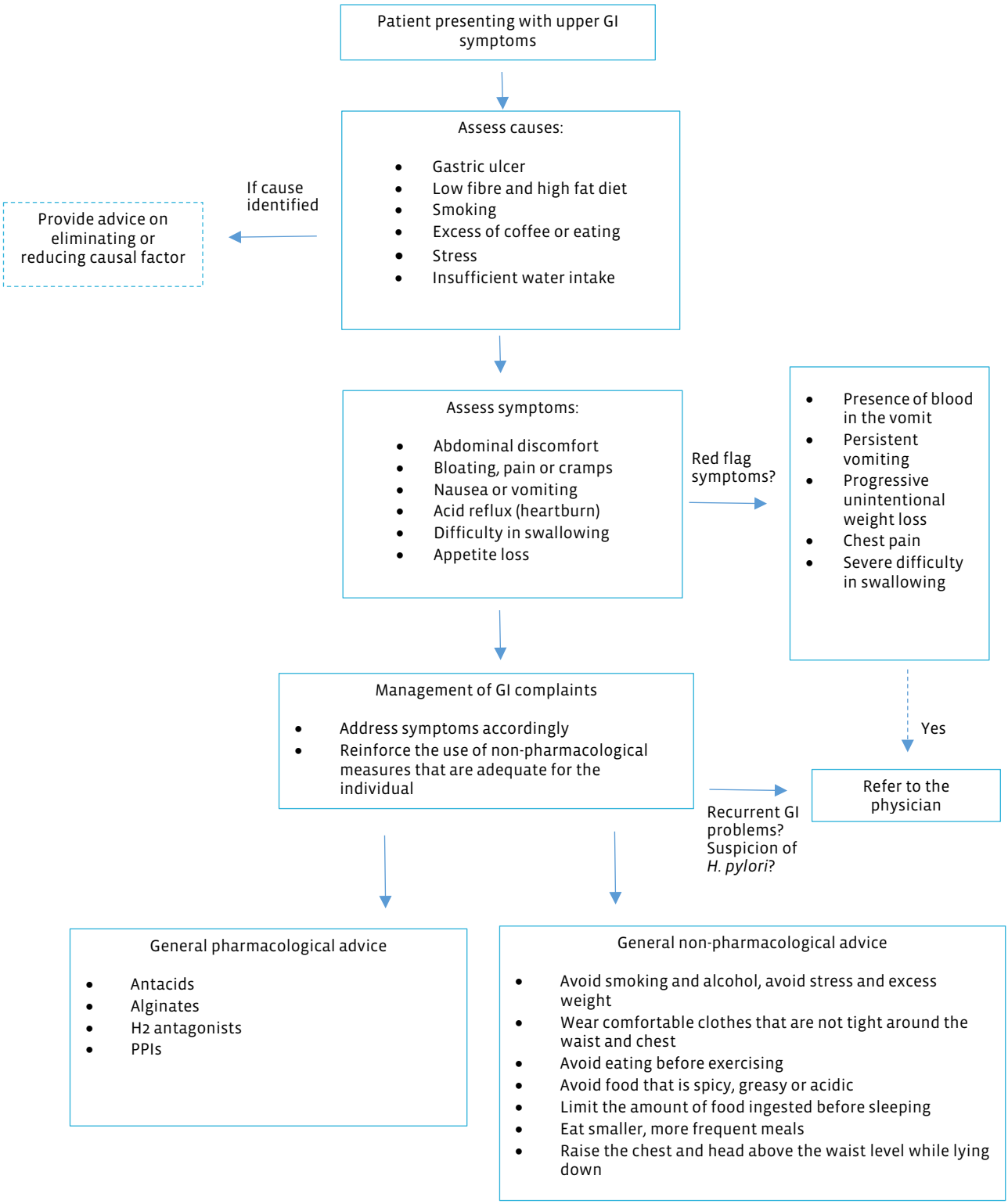
Figure 6. Options for the non-pharmacological management of reflux symptoms

7 Tips and resources for managing reflux symptoms in the community pharmacy

Below is some useful information and resources for reflux management that pharmacists can use in their practice. Figure 7 represents a decision tree for the management of upper gastrointestinal symptoms, from a previous FIP publication,[32] which can be used as a stand-alone tool.

- NHS UK Heartburn and acid reflux
- NHS UK Diarrhoea and vomiting
- National Institute of Health (USA) — GERD
- International Foundation for GI Disorders (IFFGD) — common conditions
- IFFGD sites — further resources
- National Institute of Health — Digestive diseases
- The minute counsellor — Guide to Heartburn and PPI
- World Gastroenterology Organisation: "Coping with common GI symptoms in the community"
- European Society of Paediatric Gastroenterology, Hepatology and Nutrition

Figure 7. Flow chart for reflux management[32]



8 References

1. Narasimhan M, Kapila M. Implications of self-care for health service provision. Bulletin of the World Health Organization. 2019;97(2):76. [Acessed: 10 January 2023]. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6357575/.

2. McCallian DJ, Cheigh NH. The pharmacist's role in self-care. J Am Pharm Assoc (Wash). 2002;42(5 Suppl 1):S40-1. [Acessed: 10 January 2023]. Available at: https://pubmed.ncbi.nlm.nih.gov/12296549/.

3. Bell J, Dziekan G, Pollack C et al. Self-Care in the Twenty First Century: A Vital Role for the Pharmacist. Advances in Therapy. 2016;33(10):1691-703. [Acessed: 10 January 2023]. Available at: https://doi.org/10.1007/s12325-016-0395-5.

4. World Health Organization. Universal health coverage (UHC): 2021. Available at: https://www.who.int/news-room/fact-sheets/detail/universal-health-coverage-(uhc).

5. Global Self-Care Federation. The Role of Self-Care in Universal Health Coverage: 2019. Available at: https://www.selfcarefederation.org/sites/default/files/media/documents/2019-09/Self-Care%20and%20UHC_FINAL.pdf.

6. Manolakis PG, Skelton JB. Pharmacists' contributions to primary care in the United States collaborating to address unmet patient care needs: the emerging role for pharmacists to address the shortage of primary care providers. Am J Pharm Educ. 2010;74(10):S7. [Acessed: 10 January 2023]. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3058447/.

7. World Health Organization. Self care for health. WHO Regional Office for South-East Asia: 2014. Available at: https://apps.who.int/iris/handle/10665/205887.

8. Gregory PA, Austin Z. How do patients develop trust in community pharmacists? Res Social Adm Pharm. 2021;17(5):911-20. [Acessed: 10 January 2023]. Available at: https://pubmed.ncbi.nlm.nih.gov/32814664/.

9. Locke GR, 3rd, Talley NJ, Fett SL et al. Prevalence and clinical spectrum of gastroesophageal reflux: a population-based study in Olmsted County, Minnesota. Gastroenterology. 1997;112(5):1448-56. [Acessed: 10 January 2023]. Available at: https://pubmed.ncbi.nlm.nih.gov/9136821/.

10. Zheng Z, Nordenstedt H, Pedersen NL et al. Lifestyle factors and risk for symptomatic gastroesophageal reflux in monozygotic twins. Gastroenterology. 2007;132(1):87-95. [Acessed: 10 January 2023]. Available at: https://pubmed.ncbi.nlm.nih.gov/17241862/.

11. American College of Gastroenterology. Common GI symptoms [Internet]. 2021. Available at: https://gi.org/topics/common-gi-symptoms/.

12. Newberry C, Lynch K. The role of diet in the development and management of gastroesophageal reflux disease: why we feel the burn. J Thorac Dis. 2019;11(Suppl 12):S1594-S601. [Acessed: 10 January 2023]. Available at: https://pubmed.ncbi.nlm.nih.gov/31489226.

13. El-Serag H. The association between obesity and GERD: a review of the epidemiological evidence. Dig Dis Sci. 2008;53(9):2307-12. [Acessed: 10 January 2023]. Available at: https://pubmed.ncbi.nlm.nih.gov/18651221/.

14. Singh M, Lee J, Gupta N et al. Weight loss can lead to resolution of gastroesophageal reflux disease symptoms: a prospective intervention trial. Obesity (Silver Spring). 2013;21(2):284-90. [Acessed: 10 January 2023]. Available at: https://pubmed.ncbi.nlm.nih.gov/23532991

15. Ness-Jensen E, Lagergren J. Tobacco smoking, alcohol consumption and gastro-oesophageal reflux disease. Best Pract Res Clin Gastroenterol. 2017;31(5):501-8. [Acessed: 10 January 2023]. Available at: https://pubmed.ncbi.nlm.nih.gov/29195669/.

16. Mungan Z, Pınarbaşı Şimşek B. Which drugs are risk factors for the development of gastroesophageal reflux disease? Turk J Gastroenterol. 2017;28(Suppl 1):S38-s43. [Acessed: 11 January 2023]. Available at: https://pubmed.ncbi.nlm.nih.gov/29199166/.

17. Yamasaki T, Hemond C, Eisa M et al. The Changing Epidemiology of Gastroesophageal Reflux Disease: Are Patients Getting Younger? J Neurogastroenterol Motil. 2018;24(4):559-69. [Acessed: 10 January 2023]. Available at: http://www.jnmjournal.org/journal/view.html?doi=10.5056/jnm18140.

18. Jozkow P, Wasko-Czopnik D, Medras M et al. Gastroesophageal reflux disease and physical activity. Sports Med. 2006;36(5):385-91. [Acessed: 10 January 2023]. Available at: https://pubmed.ncbi.nlm.nih.gov/16646627/.

19. Nilsson M, Johnsen R, Ye W et al. Lifestyle related risk factors in the aetiology of gastro-oesophageal reflux. Gut. 2004;53(12):1730-5. [Acessed: 10 January 2023]. Available at: https://pubmed.ncbi.nlm.nih.gov/15542505.

20. Kim SY, Kim H-J, Lim H et al. Bidirectional association between gastroesophageal reflux disease and depression: Two different nested case-control studies using a national sample cohort. Scientific Reports. 2018;8(1):11748. [Acessed: 10 January 2023]. Available at: https://doi.org/10.1038/s41598-018-29629-7.

21. Kessing BF, Bredenoord AJ, Saleh CMG et al. Effects of Anxiety and Depression in Patients With Gastroesophageal Reflux Disease. Clinical Gastroenterology and Hepatology. 2015;13(6):1089-95.e1. [Acessed: 10 January 2023]. Available at: https://www.sciencedirect.com/science/article/pii/S154235651401742X.

22. Greenwood-Van Meerveld B, Johnson AC, Grundy D. Gastrointestinal Physiology and Function. Handb Exp Pharmacol. 2017;239:1-16. [Acessed: 10 January 2023]. Available at: https://pubmed.ncbi.nlm.nih.gov/28176047/.

23. Parkman HP. Upper GI Disorders: Pathophysiology and Current Therapeutic Approaches. Handb Exp Pharmacol. 2017;239:17-37. [Acessed: 10 January 2023]. Available at: https://pubmed.ncbi.nlm.nih.gov/28105529/.

24. Mehuys E, Bortel L, De Bolle L et al. Self-Medication of Upper Gastrointestinal Symptoms: A Community Pharmacy Study. The Annals of pharmacotherapy. 2009;43:890-8. [Acessed: 10 January 2023]. Available at: https://pubmed.ncbi.nlm.nih.gov/19417113/.

25. Felice C, Leccese P, Scudeller L et al. Red flags for appropriate referral to the gastroenterologist and the rheumatologist of patients with inflammatory bowel disease and spondyloarthritis. Clinical & Experimental Immunology. 2019;196(1):123-38. [Acessed: 10 January 2023]. Available at: https://doi.org/10.1111/cei.13246.

26. Lanas A, Chan FKL. Peptic ulcer disease. The Lancet. 2017;390(10094):613-24. [Acessed: 10 January 2023]. Available at: https://doi.org/10.1016/S0140-6736(16)32404-7.

27. Santolaya M, Aldea M, Grau J et al. Evaluating the appropriateness of a community pharmacy model for a colorectal cancer screening program in Catalonia (Spain). J Oncol Pharm Pract. 2017;23(1):26-32. [Acessed: 10 January 2023]. Available at: https://pubmed.ncbi.nlm.nih.gov/26563130/.

28. MacFarlane B. Management of gastroesophageal reflux disease in adults: a pharmacist's perspective. Integr Pharm Res Pract. 2018;7:41-52. [Acessed: 10 January 2023]. Available at: https://pubmed.ncbi.nlm.nih.gov/29892570.

29. Maton PN, Burton ME. Antacids revisited: a review of their clinical pharmacology and recommended therapeutic use. Drugs. 1999;57(6):855-70. [Acessed: 10 January 2023]. Available at: https://pubmed.ncbi.nlm.nih.gov/10400401/.

30. Hunt R, Armstrong D, Katelaris P et al. World Gastroenterology Organisation Global Guidelines: GERD Global Perspective on Gastroesophageal Reflux Disease. Journal of Clinical Gastroenterology. 2017;51(6):467-78. [Acessed: 10 January 2023]. Available at: https://journals.lww.com/jcge/Fulltext/2017/07000/World_Gastroenterology_Organisation_Global.5.aspx.

31. Valussi M. Functional foods with digestion-enhancing properties. International Journal of Food Sciences and Nutrition. 2012;63(sup1):82-9. [Acessed: 10 January 2023]. Available at: https://doi.org/10.3109/09637486.2011.627841.

32. Internation Pharmaceutical Federation. Empowering self-care: A handbook for pharmacists. The Hague: [Internet]. 2022. [Acessed: 10 January 2023]. Available at: https://www.fip.org/file/5111.

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