

Assessment and treatment of reflux-like symptoms in the community: a multidisciplinary perspective

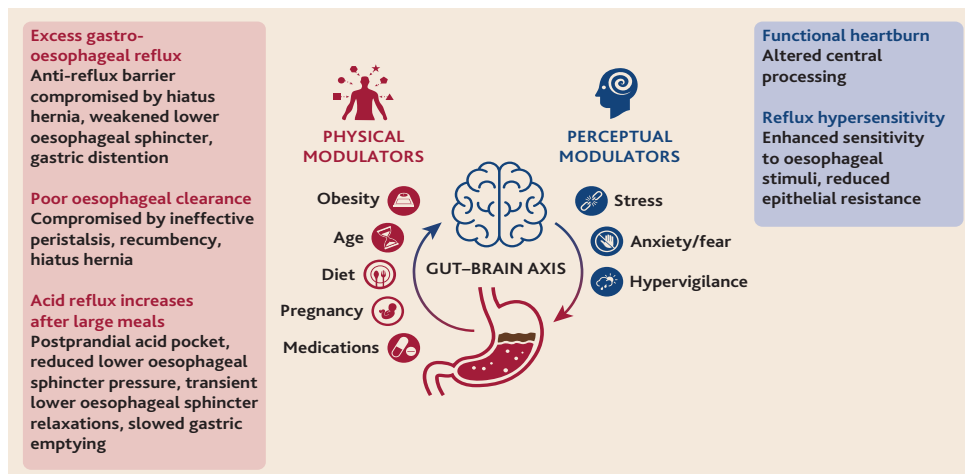
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Introduction

Heartburn and regurgitation are extremely common in Western societies, largely driven by obesity, age-related anatomical degradation of anti-reflux mechanisms, dietary, and psychological factors. Widespread diagnosis of gastro-oesophageal reflux disease (GORD) has led to liberal prescribing of proton pump inhibitors (PPIs) to ameliorate these symptoms. This strategy of first-line acid suppression is somewhat unsatisfactory for reflux-like symptoms for several reasons: 1) it equates all symptoms with a 'disease', regardless of their frequency, intensity, or potential morbidity; 2) it ignores symptom determinants other than acid reflux; and 3) it needlessly medicalises harmless symptoms compounding patient fear and hypervigilance, often reducing quality of life and driving healthcare utilisation.

The issue of PPI overuse has been addressed in recent articles highlighting the need for a more holistic approach to individualised symptom management.^{1,2} The reductionist view that heartburn and regurgitation are acid-related disorders is too simplistic, and, from the first encounter with a patient, there is a need to acknowledge and address the dietary, lifestyle, and psychosocial risk factors that may be contributing to symptoms. However, one barrier to change is the lack of high-quality evidence for these non-pharmacological strategies. Recently, a Delphi-style process was used to develop 21 statements of advice for patients with reflux-like symptoms based on review of the published evidence and expert consensus.³ The current analysis, conducted by an international group of healthcare professionals from the fields of pharmacy, general practice, nutrition, gastroenterology, and gastropsychology, assesses how to help translate these recommendations into frontline clinical and pharmacy practice.

Figure 1. Reflux-like symptom pathophysiology.



Counsel patients about the multifactorial aetiology of symptoms

Most patients are familiar with the concept of GORD whereby excessive reflux of gastric acid causes symptoms. However, while abnormalities (including hiatus hernia, reduced lower oesophageal sphincter (LOS) tone, obesity, and weak oesophageal peristalsis) contribute to oesophagitis severity, symptom pathophysiology extends beyond this paradigm, through the involvement of perceptual modulators (Figure 1). Illustrative of this, 11%–47% of patients with erosive oesophagitis report neither heartburn nor regurgitation,⁴ while heartburn may be experienced in the absence of reflux (functional heartburn) or in response to minimal reflux (reflux hypersensitivity).⁵ In such cases, symptoms are attributable to alterations in the oesophageal mucosal barrier, sensory nerve function, and/or central processing of sensory signals.⁵ Emotional stress can also modulate symptom severity, although the mechanism remains undefined.⁵ When patients interpret symptoms as harmful, anticipation of symptoms sensitises the nervous system and activates the fight-flight-freeze response, such that benign physiological sensations become amplified (hypervigilance).⁶ Taken together, this array of potential non-acid modulating factors can impact health-related quality of life more than acid reflux severity.⁷

Help patients identify their symptom triggers

A patient's dietary and behavioural profile can aid personalised management through identification of risk factors (Box 1). Among the recently published consensus-based statements of advice for patients with reflux-like symptoms, diet-related statements with the strongest level of agreement (100%) included avoidance of dietary triggers, alcohol, coffee, and carbonated beverages, and to

avoid overeating and recumbency after meals.³ Specific dietary triggers are highly individual but often include: fatty, fried, or spicy foods, acidic foods (citrus, tomatoes), and chocolate.^{8,9} Other statements concerned smoking cessation, weight loss, raising the head of the bed, stress reduction, and alginate use.³

Acid reflux occurs most commonly after meals when newly secreted acid collects above the ingested meal forming the 'acid pocket' close to the gastro-oesophageal junction.¹⁰ This acid reservoir develops within 15 minutes of eating and lasts for 1–2 hours, even with PPI treatment.¹⁰

Box 1. Major potential triggers and modulators of reflux-like symptoms^a

Eating behaviours	Dietary factors	Lifestyle	Emotional/behavioural factors	Medication
Eating too fast Large portions Eating past satiety Eating too close to bedtime	Fatty/fried foods Spicy foods (capsaicin) Excess alcohol Excess coffee Carbonated beverages Patient-specific trigger foods	Weight gain Tight garments, belts Tobacco smoking Excessive exercise	High-stress environment Hypervigilance	Anti-inflammatory medicines Antihypertensives Erectile dysfunction medicines

^aIn most instances only a small subset of these factors will be pertinent to an individual patient, making it imperative for the clinician to make individualised recommendations, based on a careful assessment of their history. Otherwise, the list can be overwhelming and overly restrictive.

During this time, the risk of gastro-oesophageal reflux increases as distension of the proximal stomach reduces LOS tone and stimulates transient LOS relaxations, a physiological mechanism for venting swallowed air. Staying upright and leaving a 2-to-3-hour interval between an evening meal and going to bed can help keep the acid pocket away from the oesophagus while the meal empties from the stomach. There is also evidence that lying on the right-side increases reflux after meals and during sleep compared with lying on the left.^{3,8} Certain medications (Box 1), and hiatus hernia, may increase the risk of reflux by reducing LOS tone, whereas central obesity, pregnancy, tight-fitting clothing, heavy lifting, and intensive exercise may increase reflux risk by increasing abdominal pressure.^{3,11,12}

In addition to factors exacerbating reflux, factors that alter central nervous system processing, such as sleep deprivation, stress, anxiety, or psychological disorders, can increase symptom perception. Functional heartburn/hypersensitivity is more common in younger patients and may have a female preponderance.¹³ Symptoms caused by heightened perception commonly coexist with related symptoms, such as backache, limb pain, headache, and dizziness, and/or other disorders of gut-brain interaction (DGBI), especially functional dyspepsia (for example, epigastric pain, nausea, early satiety, and bloating).¹⁴ In a recent study across 134 community pharmacies in Spain, 54% of patients seeking treatment for upper gastrointestinal symptoms had overlapping epigastric and retrosternal symptoms.⁹ Compared with either symptom type alone, patients with overlapping symptoms had greater impairment to quality of life, daily functioning, and sleep.⁹ They also reported greater PPI use, even though epigastric symptoms respond poorly to PPI.¹⁵

A reassuring and practical approach to empower self-care

Raising awareness of the multifactorial nature of reflux-like symptoms helps patients understand that a combination of treatments targeting dietary and lifestyle risk factors, as well as acid-reducing medicines, aids symptom relief. Managing patient expectations by explaining that symptoms normally wax and wane could avert anxiety about recurrent symptoms. Reassurance is particularly important for patients with comorbid DGBIs or suspected hypervigilance, as these can further promote psychological distress and reduced quality of life.^{5,16}

Ideally, lifestyle advice should be delivered with clear practical strategies, adapted to a patient's specific needs. For example, rather than simply advising a patient with night-time symptoms to leave a 3-hour interval between eating and going to bed, it may be more effective to discuss their daily routine and decide on a cut-off

time for dinner. A visual hand-out of a dinner plate containing the recommended portion sizes will help understanding of what is meant by 'smaller meals' and what constitutes a balanced diet. Similarly, raising the head end of the bed has proven benefits for night-time reflux symptoms and examples of how this might be achieved using blocks around 20 cm high or using a wedged shaped pillow.³ Any perceived barriers to implementation should be discussed and adjustments made where possible. While patients tend to be aware of personal dietary triggers, providing a list of potential (regionally/culturally appropriate) reflux-promoting foods could help identify foods not previously considered. In a primary care study, patients presenting with reflux-like symptoms were provided with such a precompiled list of potential trigger foods.¹⁷ After 2 weeks of dietary elimination around half of them gained sufficient symptomatic benefit such that no further pharmacological treatment or investigation was required.¹⁷ Lifestyle checklists can be helpful for allowing patients to choose which change(s) would likely benefit them (Box 2). Weight loss and smoking cessation are particularly important⁸ and there are usually existing programmes within the health service to access. Even modest weight loss of 3%–5% in overweight and obese individuals can have benefit.¹⁸ General advice should focus on positive aspects, such as setting targets for minutes of exercise per day or recommending fitness apps/local organisations supporting a more active lifestyle.

Alginates and antacids can help manage acute symptoms in patients undergoing dietary and lifestyle intervention. Alginates are particularly helpful for limiting postprandial symptoms as the gel precipitate sits on top of the acid pocket and remains in place while the ingested food empties from the stomach.¹⁰ The pH-neutral gel refluxes in place of gastric content and adheres to the oesophageal mucosa forming a protective barrier. In pregnancy, close monitoring and control of weight gain can help limit reflux symptoms, and alginate and antacids are safe to use when required.

It is also important to address suspected altered sensitivity, central dysfunction, or hypervigilance. Behavioural strategies such as mindfulness-based stress reduction, diaphragmatic breathing, cognitive behavioural therapy, and oesophageal-directed hypnotherapy have been shown to reduce visceral anxiety and symptom burden.³ However, the need for GI behavioural interventions may be reduced if there is early intervention to alleviate causes of stress and worry. The link between psychological wellbeing and physical health is being addressed by some health systems through the integration of social prescribing into medical practice. Social prescribing may be particularly relevant for reflux-like symptoms, as it aims to prevent investigation and prescribing for conditions not amenable to medical therapy.¹⁹ The objective is to help patients access local

Box 2. Lifestyle change plan for reflux-like symptoms

Healthy eating	Night-time behaviours	Exercise	Medications
<ul style="list-style-type: none"> <input type="checkbox"/> Add in fruits or vegetables at each meal (avoid citrus) <input type="checkbox"/> Use plant-based fats over animal fats <input type="checkbox"/> Opt for whole grains such as whole wheat, brown rice, oats, teff, millet, quinoa <input type="checkbox"/> Swap out animal proteins for plant-based options, for example, lentils, pulses, seeds, nuts, and legumes <input type="checkbox"/> Serve smaller portion sizes to help you reduce meal volume <input type="checkbox"/> Use smaller plates and utensils to feel satisfied with smaller amounts <input type="checkbox"/> Choose water or tea over high-sugar drinks <input type="checkbox"/> Eliminate carbonated beverages and caffeine if they trigger symptoms <input type="checkbox"/> Enjoy small desserts a few days in a week or substitute with fruit to finish a meal <input type="checkbox"/> Limit alcohol <input type="checkbox"/> Schedule meals to avoid grazing 	<ul style="list-style-type: none"> <input type="checkbox"/> Finish eating approximately 3 hours before lying down <input type="checkbox"/> Wear loose clothing to reduce pressure around the belly <input type="checkbox"/> Practise deep breathing or other stress reduction techniques before sleep <input type="checkbox"/> Avoid alcohol before bed <input type="checkbox"/> Elevate head of bed when sleeping, ideally using a wedge pillow or by adjusting mattress or head of bed <input type="checkbox"/> Lie on left side to minimise reflux 	<ul style="list-style-type: none"> <input type="checkbox"/> Accumulate 20–30 minutes of physical activity on most days of the week such as walking, swimming, dancing, exercise classes, or cleaning <input type="checkbox"/> Add in 2 days of strength and flexibility training such as weight training, yoga, Pilates, etc. <input type="checkbox"/> Incorporate activity into lifestyle. If you track steps, aim for >7000–10 000 steps on most days (5–8 km) 	<ul style="list-style-type: none"> <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____

support services relevant to their circumstances, for example, assisted navigation of welfare entitlements or housing system, debt advice services, employment/volunteer opportunities, or community groups to reduce social isolation. Reflux-like symptoms commonly co-present in patients with anxiety or depression. GPs, with wider knowledge of a patient's personal circumstances may be able to identify such individuals who may benefit from antidepressant treatment.

Strong collaboration between pharmacy and primary care to ensure a cohesive strategy of advice and support

Community pharmacies and pharmacy-based programmes have great potential for delivering health promotion, screening, and referrals, based on their convenience and ease of access.²⁰ Collaborations between primary care and community pharmacies ensure a cohesive individualised strategy for treatment, advice, and support. Establishing management protocols (agreed upon by pharmacists and GPs) for patients with reflux-like symptoms will help initial decision making and continuity of care. The initial screening should include the identification of alarm symptoms requiring specialist referral (for example, unintentional weight loss, oesophageal dysphagia, gastrointestinal bleeding).⁸ The next step is to characterise the individual's symptoms (type, timing, frequency, duration, severity), their impact (work limitations, sleep disturbance, limitation of activities, quality of life), and the main concern driving the consultation (fear, progression, cancer) and what, if anything, modulates their symptoms.^{11,21} The use of patient-friendly language is important as medical terms are often misinterpreted. Once the symptom profile and patient concerns have been established it is important to understand the patient's lifestyle, habits, and potential modulating factors, such as medications or concomitant disorder.

Time constraint is a major challenge for assessing patients in a primary care setting, especially in a busy pharmacy without access to the patient's medical history. Motivational interviewing training

could improve the skills required for eliciting patient information and encouraging lifestyle changes. For patients with a suspected perceptual component, the 7-item short form of the oesophageal hypervigilance and anxiety scale (EHAS) questionnaire may help early identification of hypervigilance or anxiety around reflux-like symptoms (score >13 indicates significance).⁷ Take-away educational materials are helpful for providing practical information and directing patients to sources of further information and support.

Pharmacy–primary care collaboration may promote the appropriate use of PPIs. Evidence indicates that a minority of long-term PPI prescriptions are for recognised indications, and pharmacy can help capture such patients. Multiple reports of associated adverse events have raised doubts about the safety of PPIs, especially with long-term use and in older patients.²² However, the generally weak associations and observational nature of these studies makes their findings questionable.²³ Nonetheless, management protocols should state the indications for short-term and long-term PPI use and encourage clinicians to utilise PPI treatment appropriately.^{24–26} Although limited, current evidence suggests that around 80% of PPI users tolerate 'deprescribing'.²²

Summary

From the first encounter with a patient troubled by heartburn and/or regurgitation, there is a need to identify and address potential dietary, lifestyle, and psychosocial risk factors. Use of consensus-based advice, reassurance, and practical support could represent a major step forward in helping patients to self-manage their condition and improve wellbeing. The key points of this analysis are: 1) patients should be made aware of both the physiological and perceptual factors contributing to symptoms that may not respond to acid suppression; 2) practical help to identify personal dietary triggers, lifestyle modifications, and cognitive risk factors should be routine elements of care at initial contact; and 3) primary care and community pharmacies should develop a cohesive strategy of referral, advice, and practical support provision for patients.

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