



Pharmacist's Guide

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Lifestyle Modification Strategies to Prevent Acid Reflux

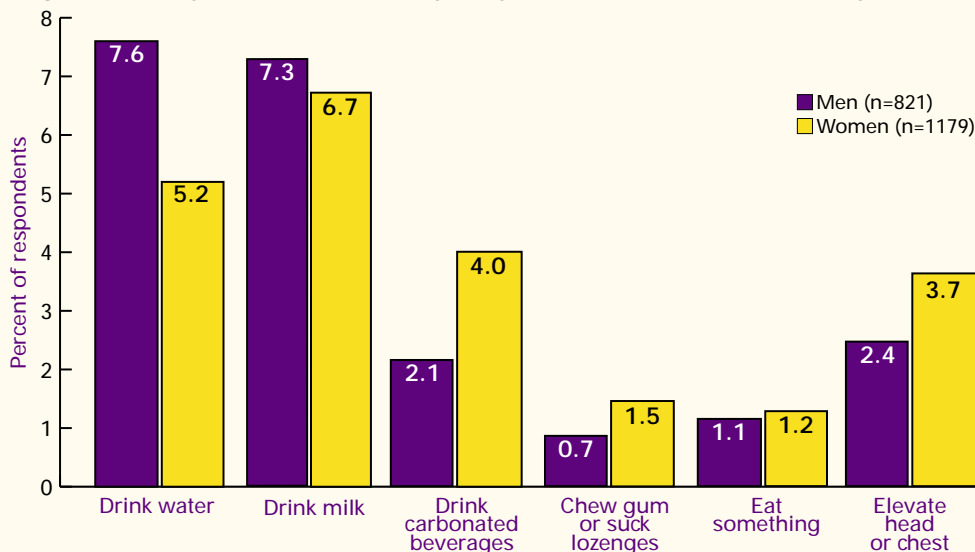
GERD management typically begins by recommending an array of lifestyle modifications to help prevent acid reflux, thereby reducing the frequency and severity of heartburn episodes (see Table 1 on page 2).¹ However, physicians often recommend that patients undertake the full array of potential lifestyle changes without identifying the specific heartburn triggers in an individual patient.² This may, however, become overwhelming for the patient and actually discourage him/her from sticking with lifestyle modifications.

Indeed, a recently published survey shows that patients with heartburn are generally unaware of what they can do to reduce their risk for episodic symptoms.² In this survey of 2000 individuals with heartburn, both male and female respondents readily identified eating large meals or fatty foods, drinking coffee, a hectic lifestyle, and increased body weight as causing their heartburn.² But, as you can see in Figure 1, patients employ a broad spectrum of behaviors to relieve their symptoms, and some individuals do things that may actually increase gastric acid secretion and reflux (eg, drink milk, which is a secretagogue).

As the first person who generally sees the heartburn patient, it is important for you to help identify the individual triggers and then to

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Figure 1: Lifestyle Behaviors Employed by Patients to Treat Heartburn Symptoms



Survey responses to a multiple-answer question (subjects answered "yes" or "no" to each question).

Adapted from Oliveria et al.²

educate the patient about (1) the reasons these triggers cause symptoms and (2) some simple measures patients can take to reduce heartburn episodes, even during prescription or OTC medication use.

Measures to Reduce Heartburn

Acid Reflux and Body Position

Patients with reflux often experience heartburn when they are lying down.^{1,3} This is because esophageal clearance slows during sleep when the effects of gravity are absent.³ It is generally recommended that individuals who suffer from heartburn not lie down for 2–3 hours after eating. Elevating the head of the bed by about 6 inches can help restore gravity and aid esophageal clearance of any acid that is refluxed into the esophagus.^{1,3} Sleeping on the left side may also help reduce symptoms. In addition, bending over raises intra-abdominal pressure, which may then trigger a transient relaxation of the lower esophageal sphincter (LES).² So patients should be encouraged to bend slowly.

Acid Reflux and Food/Beverage Consumption

Eating large meals, particularly those high in

fat content, slows gastric emptying and increases production of stomach acid for longer periods of time, thus increasing the chance for acid reflux.¹ In addition, certain foods and beverages directly contribute to heartburn by relaxing the LES, increasing acid production, irritating the esophagus, or contributing to delayed gastric emptying (see Table 1).^{1,3} However, the list is extensive and highly individualized. For example, some patients may experience heartburn after drinking coffee while others do not. The key to success is to help the patient identify his or her individual heartburn triggers and then encourage the patient to avoid them.

On the other hand, chewing gum or sucking on hard candies (except for peppermints, which can aggravate symptoms) may help relieve heartburn symptoms. These actions increase saliva production, thereby enhancing esophageal peristalsis and subsequent esophageal clearance of refluxed material. In addition, the saliva itself can neutralize refluxed material in the esophagus.¹

Acid Reflux and Medications

A number of frequently prescribed medications

Table 1. Recommended Dietary Modifications

Recommended Action	Reason Why
Eat small meals	Large meals take longer to digest than smaller meals. Thus, more stomach acid is produced, increasing the chance for reflux.
Reduce intake of fatty foods	Fatty foods significantly relax the LES. In addition, a meal high in fat content can contribute to delayed gastric emptying and increase the chance for reflux.
Reduce intake of chocolate, peppermint, spearmint, beer/alcoholic beverages	These agents are known to relax the LES.
Reduce intake of caffeinated beverages	Caffeinated beverages have been shown to increase acid production.
Reduce intake of carbonated beverages	Carbonated beverages have been shown to increase gastric distention, thus increasing the chance for transient LES relaxation and reflux.
Reduce intake of acidic foods and beverages (citrus drinks, tomato juice, etc) or irritating foods (garlic, raw onions, black pepper, vinegar, spicy foods)	These may directly irritate the esophageal mucosa.

Adapted from Castell et al.¹

Table 2. Pharmacologic Agents That Contribute to Heartburn or GERD

- Anticholinergics
- Antiparkinsonian agents
- Beta-2 agonists
- Calcium channel blockers
- Diazepam
- Estrogens/progesterones
- Nitrates
- Opioid analgesics
- Theophylline
- Tricyclic antidepressants

Adapted from Kopello and Kaplan.⁴

can precipitate or worsen heartburn symptoms. For example, calcium channel blockers can reduce LES pressure, thus permitting reflux^{1,4}; anticholinergic agents also reduce LES pressure and may reduce saliva production as well.³

A list of pharmacologic agents that can directly affect the LES appears in Table 2 above. You may wish to discuss alternative therapeutic options with the patient's physician.

Other Contributors to Acid Reflux

Cigarette smoking inhibits saliva production, relaxes the LES, and increases the amount of stomach acid; all of these effects contribute to heartburn.⁵ Therefore, it is highly recommended that patients be encouraged to stop smoking.

Extra body weight or tight-fitting clothing around the waist can increase intra-abdominal pressure, causing relaxation of the LES.^{1,2} Overweight patients should be advised to lose weight, and all patients should wear loose-fitting clothing to help avoid this phenomenon.¹

Certain types of exercise can aggravate heartburn symptoms. Encourage patients who experience exercise-related heartburn to seek advice from a qualified trainer or fitness expert who can help them vary their exercises.

Stress can increase awareness of heartburn symptoms as well as exacerbate behaviors that trigger heartburn, such as unhealthy eating. Help these patients seek out stress-reducing techniques.²

Table 3. Summary of Recommended Lifestyle Modifications for Heartburn

- Don't lie down for 2 to 3 hours after eating
- Elevate the head of the bed 4 to 6 inches
- Eat small, low-fat meals, and eat them slowly
- Reduce intake of "heartburn-inducing" foods/beverages (see Table 1 on page 2)
- Limit caffeinated and carbonated beverages
- Avoid medications that contribute to symptoms, if possible
- Stop or reduce cigarette smoking
- Wear loose-fitting clothing
- Suck hard candies (but not peppermints) or chew gum to help relieve symptoms
- If overweight, enroll in a weight-management program
- Avoid exercises you associate with heartburn. Do not exercise too soon after a meal
- Avoid or minimize hectic family, social, or business activity, if possible

Adapted from Castell et al.¹

A.C.T. Against Acid With Your Patients

The second issue of the A.C.T. Against Acid patient-education flip chart (enclosed in this package) will allow you to quickly review all of these concepts with your patients. The handy tear pad (also enclosed) will help remind patients of your counseling advice.

Coming Soon

In future issues of this program, you will be receiving additional useful information to help you *act against acid* with your patients. We hope you find it helpful.

(References: Please see page 4.)

The effect of lifestyle modifications on acid reflux

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Q. Have lifestyle modifications, such as those described in this newsletter, been proven to reduce symptoms of heartburn?

A. There have been few studies documenting the efficacy of lifestyle modifications on heartburn, a classic symptom of GERD. One study of 71 patients with severe esophagitis showed that elevating the head of the bed reduced symptoms significantly more than placebo and enhanced the effectiveness of their heartburn medication.¹ In addition, smoking more than 5 cigarettes or drinking more than 30 g of alcohol per day significantly decreased efficacy of heartburn medications.¹

Oliveria et al² (described in the feature article of this newsletter) confirmed that lifestyle behaviors, work habits, consumption of certain foods and beverages, and obesity are commonly reported as triggers by heartburn sufferers. It is reasonable to believe that changing or avoiding particular triggers in individual patients may decrease the frequency and/or severity of episodes of heartburn.

A wealth of anecdotal evidence supports this thinking, and the initiation of lifestyle modifications is an integral part of the GERD treatment guidelines put forth by the American College of Gastroenterologists (ACG).³ The ACG states that despite the lack of empiric evidence, "...expert opinion holds that education of the patient about factors that may precipitate reflux is reasonable."³

As pointed out by Dr. Oliveria and her colleagues,² however, it is clear that heartburn sufferers are generally lacking such insight into their symptoms. Although some patients may be unwilling to modify their behaviors, it seems appropriate for all health care professionals to continue educating their patients on the potential benefits of lifestyle modifications within an overall, individualized treatment regimen for heartburn.

For sufferers of moderate to severe heartburn, lifestyle modifications may not be enough to alleviate symptoms. Patients who continue to experience heartburn after taking medications and making the appropriate lifestyle modifications should be evaluated by their physician. The goal for every heartburn sufferer should be the elimination of symptoms.

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