

# ADVANCES IN GERD

Current Developments in the Management of Acid-Related GI Disorders

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## The Effects of Lifestyle Modifications on GERD

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**G&H** Based upon the studies conducted thus far, how effective is weight loss for treating gastroesophageal reflux disease?

**LG** There is good evidence that weight loss does improve symptoms due to chronic heartburn based upon analysis of the Nurses' Health Study, which was published by Jacobson and colleagues in 2006 in *The New England Journal of Medicine*. Obesity likely causes heartburn due to many factors, including an increase in intra-abdominal pressure, a greater association of hiatal hernia, and hormonal factors associated with obesity that can further reduce sphincter pressure. The study by Jacobson and colleagues demonstrated that a weight gain of approximately 10–15 pounds in a normal-weight woman is associated with an increased risk of frequent heartburn symptoms of approximately 40%. Conversely, losing approximately 10–15 pounds decreases the occurrence of frequent heartburn by approximately 40%. Patients who were overweight or obese at baseline had a 2–3-fold increased risk of frequent gastroesophageal reflux disease (GERD) symptoms. Even in subjects with normal body weight at baseline, however, the risk of heartburn increased with weight gain despite the fact that the body mass index remained in the normal range.

**G&H** Have studies also shown that reducing tobacco and alcohol is effective for treating GERD?

**LG** Tobacco has been thought to decrease sphincter pressure and potentially worsen GERD symptoms. However, three case-control studies examining the effect

of tobacco cessation on GERD did not demonstrate any improvement in heartburn symptoms or esophageal pH with tobacco cessation. Thus, there is no evidence to date that cessation of tobacco is effective in the reduction of GERD symptoms.

Similarly, it was also suggested in preliminary studies that alcohol may worsen GERD symptoms and esophageal pH. Only one study, a case-controlled trial of alcoholics compared to control patients, has been conducted in which patients stopped consumption of alcohol and the effect on GERD was measured. This study did not show that stopping alcohol use for more than 6 months improved esophageal pH levels or GERD symptoms.

**G&H** Could you discuss any data on the effect of different types of foods and drinks (eg, coffee and spicy foods) on GERD?

**LG** A number of studies have explored the effect of coffee and caffeine on GERD but could not demonstrate that sphincter pressure or esophageal pH were affected. There have been no studies in which patients were instructed to eliminate coffee or caffeine and the effect on GERD was studied. In terms of spicy foods, two studies were performed that looked specifically at sphincter pressure and pH effect, but they did not demonstrate any effect. As with coffee and caffeine, there have not been any studies in which patients have been matched to controls and told to eliminate spicy foods from their diet in order to determine the effect on heartburn symptoms.

Other foods that have been evaluated include citrus foods and chocolate, and the findings associated with both are similar to those associated with caffeine and

spicy foods. Three studies have been conducted with citrus foods, but all were unable to prove that there was an effect on lower esophageal sphincter pressure, and there have not been any studies in which people were told to remove the items from their diet. Although there is some evidence that sphincter pressure may potentially be lowered with chocolate consumption, no studies have been conducted in which heartburn subjects were told to eliminate chocolate from their diet to see if the GERD improved. Mint has also been examined, but there is no evidence to support it one way or the other. People with heartburn are commonly told to avoid carbonated beverages, but there have been no good data suggesting that eliminating carbonated beverages in a person's diet will improve GERD symptoms.

On a similar note, the effect of late-evening meals (defined as eating within 3 hours of going to bed) on GERD has been studied. As with all the other foods, there was some preliminary evidence that avoiding late-night eating might improve esophageal pH, but there is not much evidence supporting symptom improvement. Nevertheless, it is common sense to tell patients not to eat immediately before going to bed.

#### **G&H** Have studies examined the effects of head-of-bed elevation or sleeping positions on GERD?

**LG** Head-of-bed elevation has been shown to be effective in terms of improving pH as well as GERD symptoms. Head-of-bed elevation is effective, particularly for subjects with nocturnal GERD, because of the fact that stomach contents containing acid will more likely reflux into the esophagus while patients are laying flat without the beneficial effect of gravity. Head-of-bed elevation has been associated with significantly fewer and shorter reflux episodes, faster acid clearing, and fewer reflux symptoms. We usually recommend raising the head of the bed not for all GERD patients, but for those who experience nighttime symptoms or symptoms that prevent them from sleeping.

Some preliminary evidence was found that sleeping on the right side at night might worsen pH and sphincter pressure, though it is unclear whether the sphincter is more relaxed in this position. GERD occurs due to increased transient lower esophageal sphincter relaxations in the right position or possibly because the gastroesophageal junction lies above the level of gastric acid in the left lateral position. Total reflux time, average acid clearance, and lower esophageal sphincter relaxations have been reported to be significantly prolonged in patients laying on their right sides compared to the left lateral decubitus position. Laying on the left side has been shown to increase sphincter pressure and esopha-

geal pH, but it is not feasible to advise this positioning for most patients at night.

#### **G&H** Should GERD patients adhere to all of these lifestyle modifications even if abundant data do not yet exist supporting their effectiveness in improving GERD?

**LG** Of all the lifestyle modifications discussed above, the only two factors demonstrating effectiveness in randomized controlled trials have been weight loss and head-of-bed elevation. Nevertheless, the first-line GERD treatment recommended to most patients includes weight loss, eliminating a list of foods and drinks from a patient's diet (including caffeine, spicy foods, citrus, chocolate, mint, and others), and elevating the head of the bed.

I have found in my clinical practice that although patients try to adhere to all of these modifications, they often become very frustrated because their GERD may not be improving and their quality of life is affected by the significant dietary changes. Primary care physicians may inform their patients that if they eliminate all of foods listed above, their heartburn will improve. I inform my patients that we currently do not have any evidence that all of these dietary modifications will eliminate GERD symptoms. I strongly encourage patients to lose weight and recommend head-of-bed elevation only if patients are experiencing symptoms at night or after dinner. I usually consider the dietary recommendations on a case-by-case basis, telling patients to look for cause-and-effect relationships between specific foods and GERD symptoms. For example, if they notice that every time they eat spicy foods they have heartburn, they should eliminate spicy foods. However, I no longer recommend eliminating all of these food items to all patients because of the lack of supporting data.

#### **G&H** Are weight loss and head-of-bed elevation sufficient treatment in some patients with GERD?

**LG** If patients are able to lose weight, this lifestyle modification is very effective and can reduce or eliminate the need for medical therapy. The reality of the situation is that most patients are unable to lose weight. If required, bariatric surgery is an effective antireflux therapy. Lifestyle modification is usually more effective in patients with mild symptoms. For example, if they have mild heartburn before going to bed at night, then head-of-bed elevation alone may be very effective. Most of the patients I see, however, are experiencing more severe symptoms and are unlikely to benefit from lifestyle modifications alone.

**G&H** If GERD does not resolve with lifestyle modification, at what point should medical therapy come into play?

**LG** Medical therapy should come into play when people are experiencing regular symptoms that affect their quality of life. Patients who report ingestion of a significant number of anti-acid pills daily should be offered prescription medical therapy for superior symptom control.

**G&H** When moving onto medical treatment for GERD, is treatment more effective if patients try to continue the suggested lifestyle modifications as well or are they no longer helpful at that point?

**LG** I do continue to tell patients to lose weight because weight loss will help them either eliminate medications or reduce their therapy. I also continue to recommend head-of-bed elevation for nighttime symptoms. I am not as stringent with food recommendations, as discussed previously, due to the lack of adequate evidence, unless patients claim that the foods exacerbate their symptoms. Further studies are required to determine if food elimination has a significant effect on chronic GERD.

## Suggested Reading

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