

Patient Information:**Heartburn 101:****Gastroesophageal Reflux in the College Student**

In the U.S. approximately one-half of adults experience heartburn at least once a month; 1 in 5 experience the symptom on a weekly basis. Frequent heartburn is defined as heartburn occurring more than twice a week along with acid regurgitation (also called "acid reflux"). People literally will describe a "burning" sensation in the lower to mid-sternum. It may radiate higher or actually burn lower in the stomach or epigastric area. However, some people don't have a burning sensation at all. It may be merely a dull ache or vague pain in the chest, belching and bloating, hoarseness in the morning, chronic cough or the sensation of food sticking in the throat. These patients may also have a history of problems with "reflux" or "spitting-up" as children.

CAUSES OF FREQUENT HEARTBURN

Heartburn occurs when stomach acid moves back up into your esophagus. A valve between the esophagus and the stomach called the lower esophageal sphincter (LES) opens and closes to allow food and liquid into the stomach. In people with frequent heartburn, the LES weakens and doesn't close properly. This allows the stomach's contents, including acid, to move back into the esophagus. The walls of the esophagus are not designed to withstand these acidic contents. Uncommonly, structural problems with the stomach (e.g. a hiatal hernia) may cause it.

COMPLICATIONS OF LONG-TERM HEARTBURN

Over the long-term, frequent heartburn can cause inflammation of the esophagus (esophagitis), leading to worsening pain, narrowing or blockage of the esophagus, a choking sensation, bleeding (vomiting blood or passing digested blood as black or tarry stools), or unwanted weight loss. In rare cases, untreated frequent heartburn can lead to a pre-cancerous condition called Barrett's esophagus.

CAUSES OF HEARTBURN IN THE COLLEGE STUDENT

Physical condition and lifestyle behaviors can weaken the LES and lead to heartburn. Alcohol (beer, wine, liquor) and nicotine (cigarette, chewing, and hookah tobacco) in all forms are the most common causes. Furthermore, the effects may not necessarily be limited to extreme use/or abuse such as binge-drinking. Increased abdominal pressure from all degrees of obesity and the later stages of pregnancy can cause it.

Consuming certain types of food and drink can increase the acid content of the stomach. Among the culprits are all alcoholic drinks, coffee, tea, most sodas, energy drinks, acidic foods (all citrus and tomatoes), tomato-based foods like chili and pizza, fatty or fried foods, garlic, onions, chocolate, and mint flavoring. Aggravating foods may vary some between heartburn sufferers – one food may bother one, but not bother another.

TREATMENT FOR FREQUENT HEARTBURN

Typical treatment for frequent heartburn includes: 1) making changes in your lifestyle; and 2) taking medication in conjunction with lifestyle changes for optimal symptom control.

Lifestyle

- ◆ Identify and avoid foods and drinks that aggravate your symptoms. Keeping a food-symptoms diary can help you do this. See "Causes of Heartburn..." above.
- ◆ Avoid over-eating, especially at night. Eat smaller meals, more frequently if needed.
- ◆ Avoid lying down for 2-3 hours after eating.
- ◆ If you smoke, seek help on trying to quit from a counselor in SHC Office of Health Education; medications prescribed by the SHC clinic can help too. This includes hookah tobacco and chewing tobacco.
- ◆ Avoid alcoholic beverages (beer, wine, liquor of any type or strength)
- ◆ Avoid caffeinated beverages (coffee, tea, Mt. Dew[®], Dr. Pepper[®], Red Bull[®], etc.)
- ◆ Avoid taking ibuprofen (Motrin[®], Advil[®]), Aleve[®], or Aspirin[®] regularly on a daily basis for more than 5 days. Consider acetaminophen (Tylenol[®]) for pain problems.
- ◆ Try to maintain a healthy body weight. Males especially are susceptible to abdominal obesity. Dieticians (231-6444) and health educators (231-3070) are available through SHC to help you with a weight loss program. Avoid tight fitting clothing around the waist too!
- ◆ If you have night-time heartburn, raise the head of your bed up 4" - 8" with foam inserts under the mattress or blocks under the head of the bed.

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Medications

For some people, self-treating with over-the-counter (OTC) medications is a reasonable and safe first step. Often patients seen at SHC have tried them prior to their first visit for heartburn. It must be stressed, that in case your symptoms are not helped by OTC medication or last for more than 2 weeks on medications, you should be seen by a clinician to discuss your problem and guide your long-term treatment.

The following are the most common types of medications used for the treatment of frequent heartburn:

- ◆ Antacids use different combinations of magnesium, calcium and aluminum salts to neutralize the acid in your stomach. They relieve symptoms but studies show they don't heal or prevent the condition. There are many OTC brands of antacids on the market such as Maalox[®], Mylanta[®], Rolaids[®], and Tums[®]. There are generic brands for most of these which will be cheaper and just as effective for infrequent, mild heartburn. Those with aluminum salts or calcium carbonate active ingredients may cause constipation.
- ◆ Foaming agents, such as Gaviscon[®], work by covering your stomach contents with foam to prevent movement of acid back into your esophagus. This medicine contains magnesium and aluminum salts, and is used after meals and at bedtime.
- ◆ Histamine2-receptor antagonists, commonly called H2 blockers, are available as OTC products and by prescription. They work by reducing the amount of acid the stomach produces. They should not be used more than a few weeks at a time without consulting a clinician. They can interact with some medications and patients may suddenly become resistant to beneficial effects of the medications. OTC brands include cimetidine (Tagamet HB[®]), famotidine (Pepcid AC[®]), nizatidine (Axid AR[®]), and ranitidine (Zantac 75 or 150[®]). In some patients, side effects may include bowel changes, dizziness, and drowsiness.
- ◆ Proton pump inhibitors have been found to be more effective than H2 blockers for treating frequent heartburn. These medications work by shutting down many of the acid pumps in the stomach, while leaving enough for digestion. Omeprazole (Prilosec[®]) is the only PPI that is OTC, and approved for frequent heartburn and at prescription dose. Sister drugs such as Prevacid[®], Aciphex[®], Protonix[®] and Nexium[®] are still prescription-only but similar in efficacy, tolerance, but not cost! No tolerance to PPIs has been noted with long-term use like the H2 blockers. Studies of long-term use of PPIs in adults

show them to be very safe and well-tolerated. They don't appear to have marked effects on carbohydrate and protein digestion and calcium and iron absorption. If you are still having heartburn symptoms after 14 days of use OTC omeprazole (Prilosec[®]) you should visit with your SHC clinician.

So Many of Them! Which Should I Try?

The choice of medications used for your symptoms depend on the frequency, duration, and severity of heartburn. Lifestyle modifications are critical to any successful treatment and should consistently be practiced with any medication. Initially, if self-treating for mild infrequent heartburn, it is reasonable to try OTC antacids or H2 blockers*. However, if your symptoms are resistant to meds, moderate to severe intensity, and/or prolonged (more than 14 days); visit your SHC clinician for exam and advice.

*Always consult your pharmacist if you take several medications concurrently.

A trial of a PPI is often indicated here. Sometimes use of these medications are recommended for 2 weeks, but up to 8-12 weeks continuously is not uncommon. Trials of discontinuing medications are often done to see if symptoms stay in remission or if stepping down to occasional antacids or H2 blockers will suffice. But because frequent heartburn can recur, use of medication may be required again. In most cases, when medications such as PPIs are started, follow-up visits to gauge your response should be set by your clinician and contingencies made for blood work, X-rays, or referrals to specialists if symptoms are not controlled or worse.

In cases resistant to single medication therapy, sometimes combination therapy is prescribed, such as a PPI in the morning and an H2 blocker at night. Based on symptoms and response to medications, gastroenterologists may recommend special studies to visualize the esophagus and stomach, the gallbladder, and liver to better make a diagnosis. Or they may add special stomach medications to augment your treatment.

CONCLUSION

Heartburn can be a chronic and recurrent problem for some college students but can be controlled. Make the necessary lifestyle changes to allow for treatment to be most successful. Take medications as directed by label or your SHC clinician. Yet college life for some, may lead to bursts of indiscretion such as binge-drinking of alcohol to celebrate, caffeine to stay awake during test cycles, smoking to combat stress or "because everyone else does", or over-eating at a local all-you-can-eat bar. These are all choices, and as a heartburn sufferer if you engage in them you must understand that these behaviors influence your stomach as much as other areas of the body and may undermine medical efforts to make you feel better. Keep this in mind.