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Gastroesophageal Reflux Disease/ Heartburn Protocol

Introduction

Gastroesophageal reflux disease (GERD) is a common upper gastrointestinal tract condition that affects up to 30% of the adult population. It presents most often as heartburn.

GERD develops when a retrograde flow of stomach contents backs into the esophagus. It is a chronic disorder in which a disruption of the esophagogastric junction barrier results in exposure of the esophagus to acidic gastric contents.[1]

Epidemiology

GERD ranks as the most frequent functional gastrointestinal diagnosis associated with outpatient clinic visits in the U.S.[2] It accounts for more than 5.6 million physician visits each year. Rates of GERD are slightly higher in men compared to women.

Roughly 10% to 20% of adults in Western countries experience GERD symptoms at least weekly,[3] and the prevalence of GERD symptoms is increasing by about 4% per year.

It is now associated with increases in obesity rates despite a reduction in the prevalence of *Helicobacter pylori* over the past several decades (formerly considered a chief risk factor for GERD).[3] The actual occurrence of this disorder is likely masked by the use of over-the-counter, acid-reducing medications.[1]

Physiology/Diagnosis/Clinical Relevance

GERD is caused by regurgitation – a retrograde migration of acidic gastric contents into the mouth or esophagus. Heartburn is defined as a retrosternal burning sensation or discomfort that may radiate into the neck. It typically occurs after the ingestion of meals or when in a reclined position.[1]

GERD Symptoms	
COMMON[4]	ATYPICAL[1]
Burning or discomfort in the throat	Chest pain
Epigastric pain	Chronic cough
Usual onset is after meals	Asthma
Pain or difficulty swallowing	Laryngitis
Sensation of a lump in the throat	Dental erosions
Sensation of swallowed food feeling stuck in the chest	Dysphonia
Belching	Hoarseness
Nausea	

[1] https://www.ncbi.nlm.nih.gov/books/NBK441938/
[2] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5797499/
[3] https://www.ccjm.org/content/87/4/223.long
[4] https://pubmed.ncbi.nlm.nih.gov/33882662/

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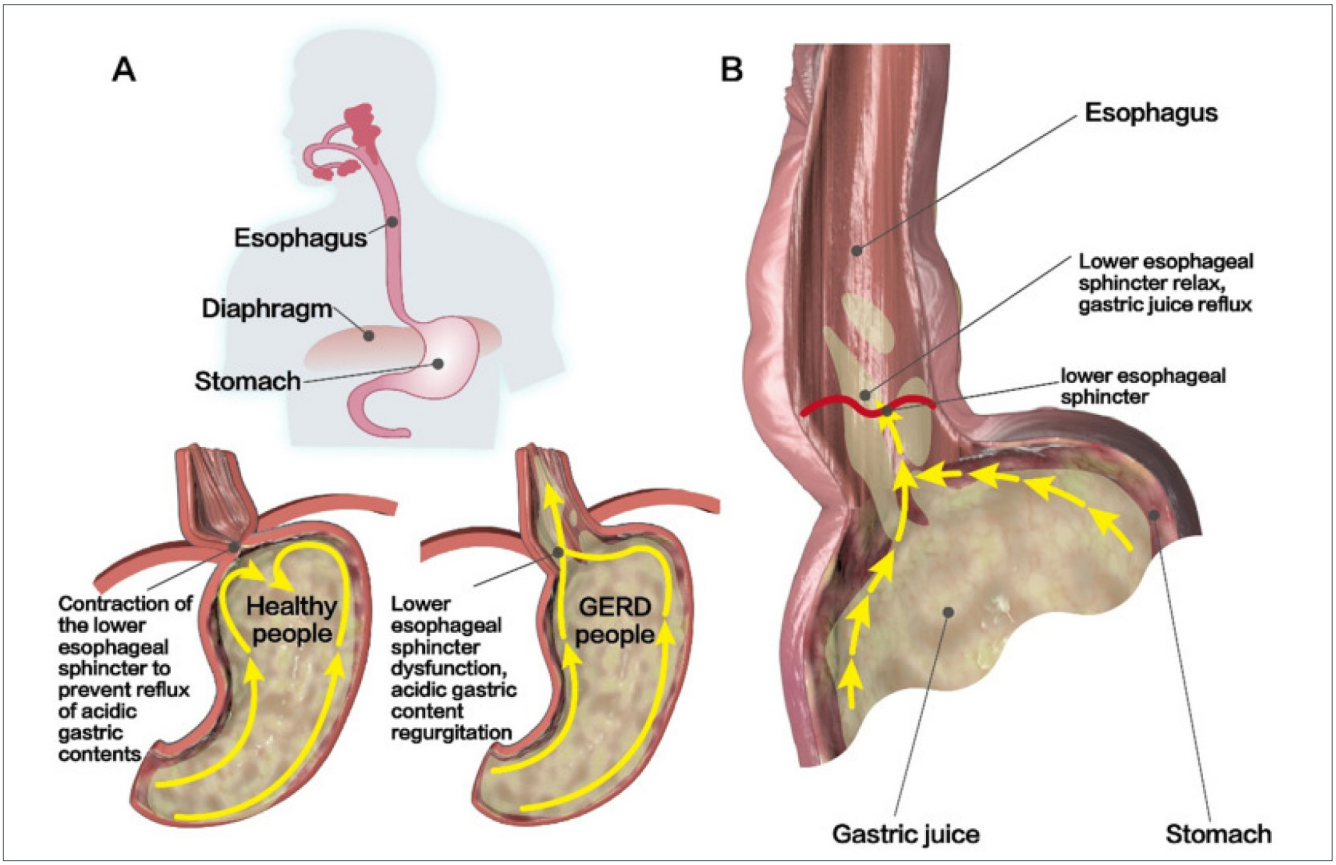

https://pubmed.ncbi.nlm.nih.gov/34803489/

As the disease progresses, the patient's quality of life can be deeply affected. Some patients may develop esophagitis, esophageal ulcers, and esophageal stenosis. In severe cases, GERD can lead to Barrett's esophagus or esophageal cancer, which can have a poor long-term prognosis.[5]

Unfortunately, there are currently no definitive test options available to confirm diagnosis. Diagnosing GERD is done primarily based on presenting symptoms, in combination with responsiveness to antisecretory drugs, or utilizing endoscopy with biopsy.

Risk Factors[5]

- Reduced lower esophageal sphincter (LES) pressure
- Transient and excessive LES relaxation (TLESR)
- Esophageal clearance dysfunction
- Esophageal hypersensitivity
- Hiatal hernia
- Pregnancy
- Mucosal barrier damage
- Age ≥50 years
- Low socioeconomic status
- Postprandial supination
- Tobacco use
- Excess alcohol consumption
- Connective tissue disorders
- Certain classes of drugs: anticholinergics, benzodiazepines, non-steroidal anti-inflammatories (NSAIDs) or aspirin use, nitroglycerin, albuterol, calcium channel blockers, antidepressants, and glucagon

[5] https://pubmed.ncbi.nlm.nih.gov/34803489/

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Clinical Pearl #1 - Consider Food Sensitivities

Food sensitivities can cause a variety of gastrointestinal symptoms, including reflux and heartburn. Food reactivity can be identified using an elimination diet and symptom tracking or food sensitivity testing. Following an elimination diet for a period of time will often lead to improvement in symptoms, and foods may eventually and gradually be reintroduced.

The most common food sensitivities are lactose/dairy, gluten, FODMAPs (fermentable oligosaccharides, disaccharides, monosaccharides, and polyols), soy, corn, eggs, coffee, yeast, wine, food colorings, preservatives, sulfites, and fructose.

Clinical Pearl #2 - Consider Gastric Acid

Patients experiencing heartburn or reflux symptoms will often be given a trial of acid-suppressing medication, assuming that the reflux is due to *hyperchlorhydria* (excessive stomach acid). These medications will often resolve symptoms. Patients may even self-medicate with over-the-counter antacids to find relief.

Hyperchlorhydria can indeed result in symptoms of reflux. But more often, the symptoms are a result of *hypochlorhydria* (too little stomach acid).

How can this be?
Strangely, either too much or too little stomach acid can cause similar symptoms. We need gastric acid to stimulate the LES to close properly. When stomach acid level drops (or pH increases), the LES gets lazy and opens up, resulting in a reflux of stomach contents. This scenario is far more common than hyperchlorhydria (too much stomach acid). Stomach acid levels drop for many reasons, including age, stress, and the risk factors listed above.

So, while completely wiping out stomach acid will bring symptomatic relief, it may exacerbate the underlying cause of the problem – if that problem is too little rather than too much stomach acid. Not to mention that adequate stomach acid initiates all downstream digestion and is essential for detoxification and nutrient absorption.

Along with the therapeutics listed here, an alternative to eliminating stomach acid is to support healthy stomach acid levels with apple cider vinegar in water; lemon juice; betaine hydrochloride; and/or bitters.

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Clinical Pearl #3 - Assess for Food Allergies or Histamine Intolerance

Histamine plays an important role in the production of stomach acid, stimulating the stomach's parietal cells to release hydrochloric acid. Overproduction of histamine, as occurs in allergy, can contribute to GERD by increasing stomach acid and irritating the LES.

Similarly, the inability to degrade histamine that enters the stomach in food can result in GERD symptoms that may be due to histamine intolerance. In a healthy gut, histamine is neutralized by diamine oxidase (DAO), an enzyme produced by the brush border of the GI tract. For patients with histamine intolerance, a deficiency in DAO prevents the breakdown of histamine, resulting in a myriad of symptoms which may include reflux.

It is simple yet important to evaluate for the presence of food allergies and/or histamine intolerance in the presence of reflux.

Clinical Pearl #4 - Assess for *Helicobacter pylori* or Other Dysbiosis

Dysbiosis (esophageal, stomach, or upper GI) can be an underlying cause of reflux. Reflux can be caused by individual culprits such as *H. pylori* or by generalized dysbiosis. The result is damage to the GI mucosa, a proinflammatory state, and/or histamine intolerance.

While the research is mixed on *H. pylori* as a cause of GERD, some clinicians have found increased abundance of this microorganism in those experiencing GERD and heartburn.

It is evident from research that the esophagus contains its own microbiome, and studies suggest that the esophageal microbiome plays a major role in the pathogenesis of disease by inciting an immunogenic response, which ultimately results in an inflammatory cascade.[6]

Due to the relationship between the gastrointestinal microbiome and esophageal microbiome, practitioners must assess for and treat dysbiosis to minimize the risk for the development or progression of GERD and its related complications.

Ingredient Spotlight for Digestive Health

GutGard® Deglycyrrhizinated Licorice (DGL)

Published research on GutGard® has shown the following clinical activities:

- Anti-ulcer activity
- Anti-inflammatory
- Anti-*H. pylori*
- Management of functional dyspepsia
- Supports gastric motility
- Gastroprotective
- Improvement in gastrointestinal Secretory IgA and mucus
- Gut barrier support

[6] https://pubmed.ncbi.nlm.nih.gov/34025064/

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Lifestyle Recommendations

- **Adopt healthy habits.** Support your treatment with some simple yet effective lifestyle tips. See our recommendations in the Bioclear® Microbiome Detox Program Lifestyle Guide.
- **Practice purposeful eating.** Teaching patients to take adequate time to prepare and eat their meals, chew their food well, sit while eating, avoid distractions and multitasking, and avoid drinking excess water or fluids during meals can all help ensure better digestive function.
- **Manage stress.** Stress is a major risk factor for GERD and is known to negatively impact digestive function – including by decreasing production of stomach acid and digestive enzymes. Patients with high stress levels often experience indigestion, reflux, heartburn, bloating, belching, and altered stools. Encouraging those experiencing heartburn or reflux to practice stress management may help ease their symptoms and support healthy digestion. Techniques for managing stress include deep breathing, meditation, yoga, massage, journaling, and taking walks in nature.

Therapeutic Plan Suggestions

GERD/Heartburn Support		
CORE PROTOCOL		
G.I. InnerCalm™	1 stick pack mixed in water, 1-2 times daily, taken any time	
G.I. Detox™+	1 capsule one hour after each meal, and away from other supplements or medications if dysbiosis is suspected	
ADDITIONAL SUPPORT		
Biocidin® Liquid or Capsules	Titrate to 15 drops 2x/day	Titrate to 2 capsules 2x/day
Proflora™ 4R	1 capsule any time	
Biotonic™	20 drops 2x/day	

Additional Therapeutics/Supplements

- 1 tablespoon of apple cider vinegar in 4 ounces of water 15 minutes before meals, or an herbal bitters tincture 15 minutes before meals. Both can help prepare digestion.
- Betaine HCl with or without digestive enzymes
- Slippery elm, Marshmallow, and Aloe vera can help soothe symptoms