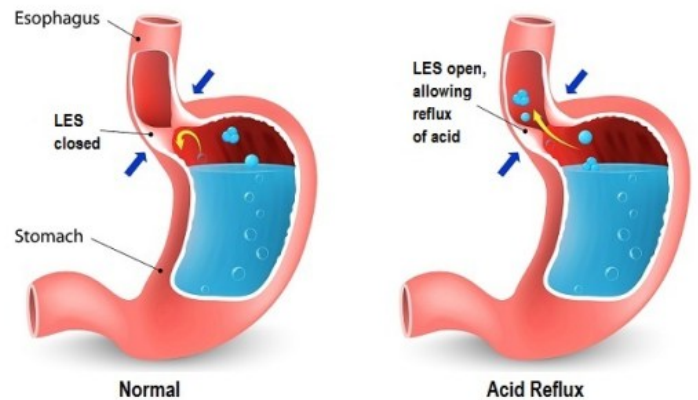


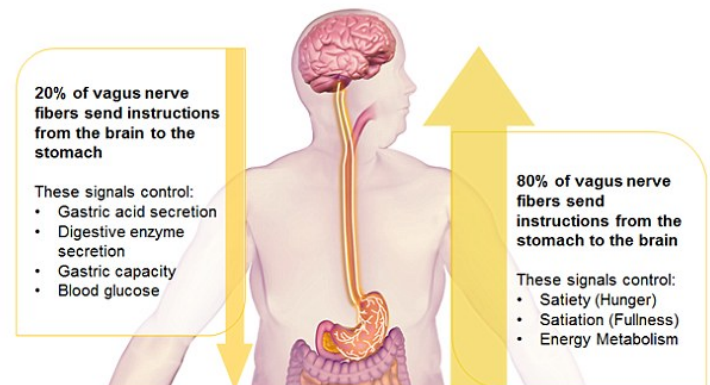
Acid reflux is a symptom that results from gastric contents flowing up into the esophagus. These gastric contents contain gastric acid and pepsin which cause heartburn and possible damage to the esophagus lining. Gastroesophageal reflux disease (GERD) occurs when acid reflux has caused extensive structural damage to the esophagus and the lower esophageal sphincter (LES). The causes of acid reflux are stress, low stomach motility or gastroparesis, gastritis, and infections.



Stress is one of the main root causes of acid reflux. Acid production in the stomach is regulated by the Vagus nerve upon food ingestion. The Vagus nerve plays a central role in the regulation of gastric acid secretion. In response to meal ingestion, the medullary raphe nuclei in the brain stem produces thyrotropin releasing hormone (TRH) which is the central excitatory mediator that activates the dorsal motor nucleus (DMN) of the Vagus. This is the cephalic phase of acid secretion. In response to activation of DMN, stomach parietal cells secrete gastric acid (HCl) and G-cells secrete gastrin, a peptide hormone that stimulates secretion of acid by the parietal cells. This is the gastric phase of acid secretion.

As much as 50 percent of the maximal acid response to a meal may be due to the cephalic phase. Stress can reduce stomach acid secretion by affecting the cephalic phase because stress may interfere with TRH secretion. Experiments have shown that microinjections of small doses of TRH into the DMN in rats cause significant stimulation of acid secretion and contractions of the stomach. Administration of oxytocin, a peptide known to be released during stress by the intracisternal (i.c.) area of the brain produces an inhibitory effect on acid secretion. Stress can also cause reduced acid secretion by interfering with the gastric phase of acid secretion. Stress induced blood flow reduction to the stomach can substantially decrease the parietal cell and the G-cell response to the Vagus nerve impulses.

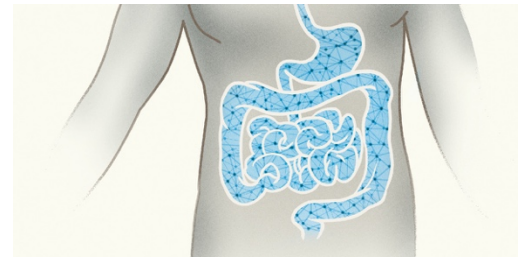
The closure of the LES or cardiac sphincter is partially controlled by stomach acid levels. High quantities of stomach acid triggers tight closing of the LES. Reduced acid levels under stress produce a weaker signal to close the LES. A weaker signal to close the LES causes the stomach to stay open and allows what little acid is in the stomach to come up and irritate the esophagus and cardiac sphincter. The acid irritation of the esophagus causes heart burn, reflux and even indigestion.



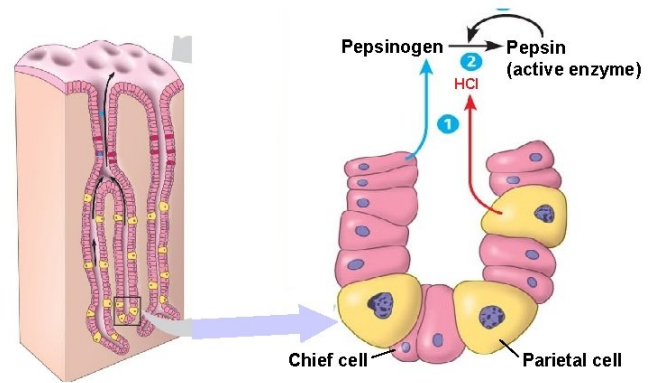
Indigestion and gastroparesis are conditions characterized by decreased gut motility and delayed emptying of the stomach and small intestines. Gut motility is regulated by the enteric nervous system (ENS), a mesh-like system of neurons. Physical or mental stresses increase blood flow to the muscles and brain resulting in a diversion of blood away from other body parts, most commonly the gut. This relative decrease in blood flow to the gut can affect enteric nervous function, slow gut motility, and thus cause indigestion and gastroparesis. Excess carbohydrate and caffeine intake also has adverse effects on gut motility by interfering with enteric nervous function.

Even though some patients with GERD have weak LES or diaphragmatic sphincters, in most patients, especially in cases of mild to moderate reflux disease, LES and diaphragmatic sphincter function is normal. Back flow of stomach contents into the esophagus is usually caused by transient LES relaxation (TLESR) induced by a pressure build up

and gastric distention due to indigestion, gastroparesis, or over eating. Such processes are regulated by the enteric nervous system. Indigestion and gastroparesis will cause nausea and vomiting in addition to acid reflux. Other symptoms of gastroparesis include bloating, a feeling of fullness after eating just a few bites, weight loss, and nutritional deficiencies in severe cases due to lack of appetite and reduced food intake, as well as abdominal pain though the cause of the pain is unclear.

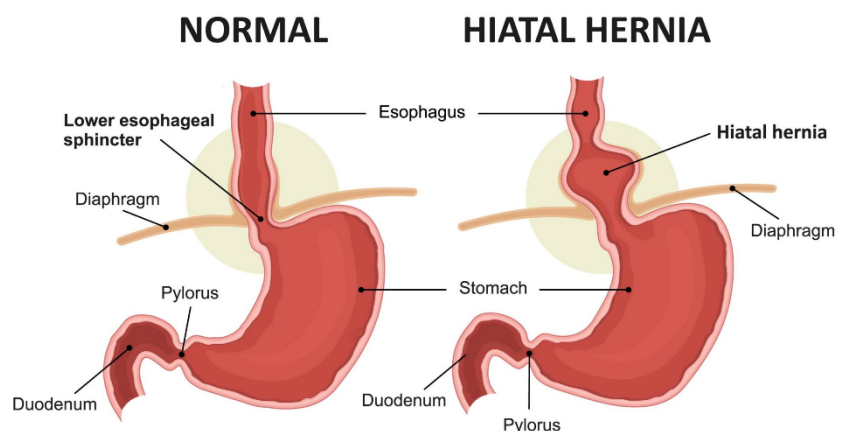


Gastroesophageal reflux disease (GERD) affects more than 40 percent of Americans. GERD is a more severe form of chronic acid reflux in which esophagus and lower esophageal sphincter damage has occurred. Such damage is caused by the back flow of chyme which contains not only stomach acid but also stomach enzymes such as pepsin which break down the structure of the esophagus and the lower esophageal sphincter. The digestive process starts when food ingestion triggers stomach acid production by the parietal cells in the stomach lining, a process regulated by the Vagus nerve. The stomach acid then induces the chief cells in the stomach lining to secrete pepsinogen. Pepsinogen is an inactive precursor that is converted to pepsin by stomach acid. Already present pepsin can also further activate the pepsinogen to pepsin. Pepsin is the main enzyme that digests protein into polypeptides in the stomach. In patients with indigestion or gastroparesis, the refluxed food contents contain not only stomach acid but also pepsin. This mixture can cause extensive structural damage to the epithelium of the esophagus and the lower esophageal sphincter. Impairment of the mucosal integrity will occur leading to the development of GERD. Besides frequent heart burn, other signs and symptoms may include regurgitation of food or sour liquid, difficulty swallowing, dryness in the throat, coughing, wheezing, and chest pain, especially while lying.



When acid reflux progresses to GERD, emotional stress and anxiety can significantly increase GERD symptoms. A more recent study interviewed 12,653 people with GERD and found that nearly half reported stress as the biggest factor that worsened symptoms, even when on medication.⁹ Anxiety and other psychological distress may impact esophageal motility, which is the contractions of esophagus to move food into the stomach, and the functioning of the LES. Stress also increased GERD and acid reflux symptoms by making them more sensitive to acid exposure.

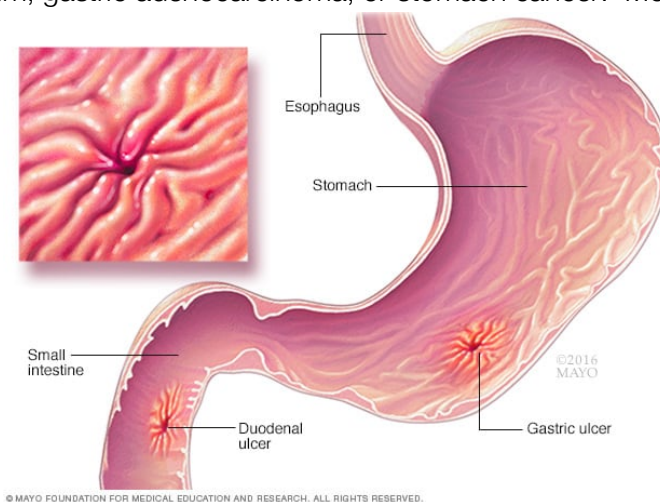
Hiatal hernia can occur from long-lasting GERD when the LES starts to lose its function and causes acid reflux. Hiatal hernias can also occur when muscle tissue in the diaphragm surrounding the esophageal sphincter weakens allowing the upper part of the stomach to move freely into the hiatus or bulge up through the diaphragm into the chest cavity. The hole in the diaphragm (hiatus) through which food and liquids pass from the esophagus into the stomach enlarges and causes acid reflux. The cause of diaphragm muscle weakness includes inherited structural abnormalities in the diaphragm and excess pressure on the abdomen or muscle strain due to heavy coughing, constipation, or intense physical exertion.



Gastritis is an inflammation of the stomach lining. Chronic stress can cause inflammation of the stomach and LES due to the production of pro-inflammatory cytokines promoted by increased levels of cortisol and other corticosteroids triggered by chronic stress. The inflammation of the stomach and LES further slows the stomach emptying process and exacerbates the indigestion, gastroparesis, and acid reflux conditions.

H. pylori (*Helicobacter pylori*) are bacteria that can cause an infection in the stomach or duodenum (first part of the small intestine). This usually happens during childhood. Although antibiotic treatment is available for H. Pylori infections, about 20% of patients do not respond. H. Pylori infections trigger stomach mucosal inflammatory response leading to gastritis. Chronic gastritis can progress to atrophic gastritis with a loss of gastric glandular cells, or peptic ulcers with open sores in the stomach or duodenum, gastric adenocarcinoma, or stomach cancer. Most people with H. pylori infections will never have any signs or symptoms. However, when patients start having symptoms they usually include heartburn, burning pain in the upper abdomen that's worse when the stomach is empty, burping, belching or bloating, nausea, dull ache, loss of appetite and weight loss.

H. pylori gastritis can alter gastric acid secretion. In subjects with a predominant antral gastritis with the infection on the lower portion of the stomach, acid secretion is increased predisposing to duodenal ulcer. In others with predominant body gastritis with the infection in the middle portion of the stomach, acid secretion is impaired and the subjects have an increased risk of gastric cancer. The stomach acidity can also alter the distribution of the infection. When H. pylori-positive subjects with antral gastritis are treated with proton pump inhibitors, the inhibition of acid secretion can induce a body gastritis which augments the acid reduction effect of the drug. When H. pylori colonizes in the esophagus, it increases the severity of esophageal inflammation and the incidence of Barrett's esophagitis (BE) and GERD.



Although H. pylori colonization is a strong risk factor for peptic ulceration and distal gastric cancer; clinical data shows that the prevalence of H. pylori is inversely related to GERD and its sequelae, which include Barrett's esophagus and esophageal adenocarcinoma. H. pylori eradication may lead to the development of new erosive GERD.^{5,6} In a study which followed 167 patients, it was found that after 16 months of successful treatment, 20 of them tested positive for H. pylori again. Among the 147 patients who have negative H. pylori tests, 87 patients (60%) still reported heartburn, epigastric pain or nausea. Among them 46 patients reported heartburn and 18 of them (39%) stated that the heartburn is a new symptom.⁷ The development of GERD after H. pylori eradication may be related to the extent of atrophy and intestinal metaplasia. The eradication of H. pylori causes improvement of gastric atrophy and intestinal metaplasia and increase of gastric acid secretion levels in corpus predominant gastritis. These changes increase the risk of reflux esophagitis and low-dosage aspirin ulcers.⁸

Liver conditions can also cause GERD and acid reflux symptoms. Clinical data shows that individuals who have fatty liver diseases are at a greater risk of being diagnosed with GERD. Portal hypertension and liver fibrosis or cirrhosis can cause slowdown of the blood flow that comes from the digestive tract passing through the liver. This results in the blood accumulation in the digestive system and puts pressure on the GI and affects GI function causing acid reflux as well as other conditions and symptoms including gastroesophageal varices, portal vein hypertension, stomach tightness, difficult swallowing, and sensation of lumps in the throat.

Antacids including proton pump inhibitors are commonly used by patients with acid reflux. Prolonged use of antacids reduces the acidity of the stomach lumen. As a result, bacteria can survive the acid sterilization process in the GI tract and cause infection and inflammation. This causes an imbalance of gut flora, over growth of unfriendly germs which can lead to infections.

Wellness Recommendation

Wei Laboratories' Spring Capsule, SJ formula and Formula B are recommended for patients with acid reflux. Probiosis is also required if patients also have stomach inflammation. Spring Capsule helps increase stomach blood flow to enhance stomach acid production. Spring Capsules help boost stomach and middle jiao's Yang to warm

up the stomach. Herbal ingredients in Spring Capsule have been shown to increase stomach and intestinal motility and enhance stomach acid and digestive enzymes secretion.² This helps with the function of the LES to close after meal ingestion. SJ helps repair damage to the stomach and esophageal lining and restore the health of stomach cells to restore production of acid, intrinsic factor, and stomach enzymes. SJ nurtures the stomach Yin and reverses its degeneration. Herbal ingredients in SJ have been shown to moisten the intestines as well as nourish the stomach. They also help to repair esophageal damage which is key in the structural damages produced by acid reflux.¹ Formula B regulates stomach contractions and opens up the pyloric sphincter to facilitate the food emptying process and ensure proper mixing of food with stomach acid. Formula B also helps resolve indigestion and gastroparesis by enhancing stomach Qi. Formula B also enhances intestinal contractions to prevent constipation. Herbal ingredients in Formula B have been shown to increase the levels of gastric hormone gastrin and motilin which results in improving the gastric emptying process.³ They also help activate the vagal nerve pathway.³ Probiotics help reduce stomach inflammation. The protocol will help restore stomach acidity, repair the upper GI lining, reduce the symptoms of acid reflux, resolve indigestion and gastroparesis, and reduce stomach inflammation.

For patients who have Liver Heat with symptoms of heavy appetite, binge eating and lack of taste, Luminen is recommended to replace the Formula B to reduce liver heat and enhance and descend stomach Qi. Patients can experience improvement in 1-2 weeks as normal stomach function is restored. 2-3 weeks of treatment for mild and moderate conditions and 3-4 weeks of treatment for severe conditions are required for significant improvement.

For patients who experience temporary acid reflux due to over eating, Formula B alone can help relieve the symptoms. Patients will have symptom improve with a single dose. 2-3 doses may be required. If patients take Formula B right away after eating too much, acid reflux can be prevented.

For patients whose acid reflux is caused by stress, Calm formula is recommended. Calm helps regulate brain function and helps reduce toxic physiological effects caused by stress. Herbal ingredients in Calm have often been used to treat symptoms of stress-related neuropsychological disorders.⁴ They reduce neuroinflammation as well reduce oxidative stress.⁴ Patients will experience a reduced stress response within 1 day of treatment. 4-6 weeks of treatment may be required to help achieve sustained results.

For patients with severe GERD and hiatal hernia, Digestive Aid formula and Formula H are recommended. Digestive Aid formula helps improve food digestion and resolves constipation by nurturing the spleen. Formula H helps restore the damage to the LES and improve esophageal mobility by resolving Liver Qi Stagnation and nurturing the stomach. By resolving Liver Qi stagnation, Formula H also helps reduce anxiety and symptoms caused by psychological distress.

For patients who have an H. Pylori infection with symptoms of ulcers, Formula D is recommended. Formula D removes Heat and toxins from the stomach. It helps clear inflammation and infection and used together with SJ and Formula B can help to resolve gastritis and peptic ulcers. Patients can experience improvement in 1-2 weeks and 4-6 weeks of treatment are required for significant improvement. Digestive Aid formula and Formula H are also recommended if patients develop GERD symptoms after the eradication of H. pylori.

For patients whose acid reflux is caused by liver inflammation or fibrosis, Brown and Levera are recommended to reduce liver inflammation. Cirrhonin and Lido are recommended to help dissolve the fibrotic tissue in the liver and resolve the condition of increased blood accumulation in the digestive tract and the resulting symptoms of acid reflux and gastroesophageal varices. Patients can experience improvement in 2 weeks and up to 3 months of treatment is required for significant improvement.

Protocol Summary

Acid Reflux	SJ, Spring Capsule, Formula B
Complications	Product Recommendation
GI Inflammation	Probiosis
Liver Heat (Heavy Appetitive)	Luminen
GERD	Pearl
Over Eating	Formula B (alone)
Stress	Calm
Severe GERD & Hiatal Hernia	Digestive Aid, Formula H
H. Pylori Infection (Peptic Ulcers)	Formula D, Digestive Aid, Formula H
Liver Inflammation/Fibrosis	Brown, Levera, Cirrhonin, Lido

Suggested Dosage:

Spring Capsule: 2 Capsules, 3 times a day

SJ: 2 Capsules, 3 times a day

Formula B: 3 Capsules, 3 times a day

Luminen: 2 capsules, 2 times a day (use as needed)

Probiosis: 2 Capsules, 3 times a day

Pearl: 1 Capsule, 3 times a day

Calm: 2 Capsules, 3 times a day

Digestive Aid: 2 Capsules, 2 times a day

Formula H: 2 Capsules, 3 times a day

Selected Case Studies

Case 1: Complete Resolution of Acid Reflux and Reversal of Esophageal Damage

Dr. Christopher Lewis, DC, TN

A 79-year-old male presented with chronic acid reflux which was believed to correlate with his Idiopathic Pulmonary Fibrosis. Dr. Lewis recommended a protocol from Wei Laboratories consisting of the following natural herbal formulas: SJ, Spring Capsule, Formula B, and Probiosis, to restore the patient's digestive enzymes, as well as repair esophageal and stomach damage.

After a 6-week herbal program, the patient had an upper gastrointestinal endoscopy done by his medical doctor which revealed the best report in the past 20 years showing less esophageal damage. The patient had little to no heartburn symptoms and had an increased rate of digestion and absorption. The medical doctor recommended continuing the herbal formulas.

Case 2: Acid Reflux / Heartburn Was Resolved

Marco Cazares, DC, Indio, CA

A patient came to my office suffering from severe acid reflux and was prescribed the herbal treatment from Wei Laboratories that targets gastrointestinal (GI) tract (Spring Capsules, Spring Juice, Formula B and Pearl Capsules). The patient initially experienced some dizziness and I recommended the patient decrease the dosage by one half. At the third week of treatment, the acid reflux symptom was completely eliminated.

Case 3: Successful Treatment of COPD Complicated with Acid Reflux

Jack Kucheran, DC, Calgary, Alberta, Canada

Age 75 female patient with COPD and Acid Reflux reported chronic productive cough (thick grey phlegm), exhaustion, fatigue, shortness of breath, difficulty breathing, weakness, acid reflux, poor digestion, swollen ankles, abdominal cramps, stomach pain, difficulty walking 1-2 blocks, and a need sleep in the afternoon. Patient's COPD condition was related to her acid reflux.

Patient was prescribed Soup A, Soup B, LC Balancer for 2 months to treat the COPD. Spring Juice, Spring Capsule, Formula B and Peal Capsule were prescribed for 3 weeks to treat the Acid Reflux at the same time to prevent any complications. After 3 weeks, patient had no acid reflux, improved digestion and energy. At the end of the 2 months treatment, patient is able to walk 1 mile with cough 95% better and disappearance of all other symptoms.

Case 4: Successful Treatment of Sciatic Hip Pain (Piriformis Syndrome) and GERD

Michelle Heiring, DPM, Chicago, Illinois

A male patient in his 80s visited Dr. Heiring for his severe sciatic pain where the thigh and buttock meet. Patient was in very poor health condition. He had GERD, gastric reflux disorder, congestion in his lungs and always coughing up phlegm. Is taking acid blocker for his stomach condition. He also has Atrial Fibrillation and is taking Coumadin. Due to his heart, lung and stomach conditions, as well as his sciatica, the patient cannot sleep in a bed and sleeps by sitting in his chair all night. Besides the sciatica, the patient also has pain at the posterior and superior thigh, and the buttocks which shoot into his right ankle and foot. He did not really have pain in his leg or lower leg. The radiating pain might be caused by his lower back problems due to his mechanical issues.

Dr. Heiring thought the patient had Piriformis Syndrome, a type of pain at the hip area caused by poor circulation related to his GERD condition. She recommended Wei Lab treatment products including 12 Large WHITEE Patches and 4 bottles of LC Balancer for his sciatica and SJ, Spring Capsule and Pearl: 2 bottles of each and 1 bottle of Formula B to help his stomach. Patient finished the treatment in 6 weeks and reported the WHITEE Patch and the intake formulas really helped him. The sciatica pain is completely gone and he has no more sciatic pain! His GI condition has also improved greatly. Although he still has some hacking and phlegm, but he is overall much better! Patient is now considering using patches for his knee osteoarthritis.

Case 5: Calm Formula Improves Mental Clarity and Helps Relieve Stress

Mayda Carrillo, AP/RN, Clearwater, Florida

A female patient of Dr. Carrillo had been functioning under high stress for a period of time. She was in her 50s and ran her own office. Her position imposed on her many responsibilities, which required her to multitask all the time. She was constantly distracted due to having to multitask, and she was often easily agitated.

Dr. Carrillo recommended the Calm Formula from Wei Laboratories to her. After taking it, she notices that she does not get as nervous under high stress situations compared to when she was not taking it. She is better able to multitask and is much more organized when she is taking the Calm Formula. Her mind is clearer and her emotion is more grounded, and her memory is improved. She is better able to deal with the stress she is facing, and her mood is improved. The patient is really appreciative that Dr. Carrillo brought Calm Formula to her, which she thinks can benefit many people!

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