

Gastroesophageal reflux disease (GERD)

Overview

- Gastroesophageal reflux disease (GERD) is a digestive disorder that occurs when acidic stomach juices, or food and fluids back up from the stomach into the esophagus¹.
- The prevalence of GERD in Asia is low, ranging from 2.5% to 7.1% for weekly reflux, 3.8% to 4.6% for twice weekly reflux, and 2.1% for daily reflux, but it might be due to low awareness of the disorder².
- The prevalence of symptom-based GERD in Southeast Asia has been rising³ and was estimated to be 6.3%–18.3% from 2005–2010⁴.
- Left untreated, GERD can result in an esophageal mucosal injury known as reflux esophagitis where persistent backflow of acidic digestive juices will damage the lining of the oesophagus over time⁵.



Symptoms and signs



Heartburn⁶



Regurgitation⁶



Vomiting⁶



Difficulty swallowing⁶



Burning feeling in stomach or near chest area⁷



Chest pain⁷



Indigestion⁷

Causes and risk factors

- Obesity⁸
- Hiatal hernia, a condition where the upper part of the stomach moves up into the chest through an opening in the diaphragm, which lowers the pressure in the oesophageal sphincter⁸
- Stress⁹
- Certain foods and beverages, such as spicy or fatty foods, chocolate, peppermint, coffee, or alcoholic beverages¹⁰
- Smoking¹¹
- Use of certain medications, including calcium channel blockers, painkillers, sedatives, and antidepressants¹²

Supplement recommendations

Fermented soy peptide

Benefits

Symptoms of GERD

It has been shown that fermented soy improved some indicators of heartburn-related quality of life and may have potential benefits for reducing heartburn frequency over time¹³.

Studies on gastritis patients have shown that taking a patented food supplement based on non-GMO fermented soy, Gastro-AD[®] 30 minutes before a meal for 30 days helps in rapid and long-lasting relief within 15 minutes or less^{14,15}. Gastro-AD[®] not only consisted of fermented soy peptides but also a significant proportion of heat-inactivated Rosell-187 (R0187) strain of lactic acid bacteria. It is shown that R0187 may have a suppressive effect on interleukin⁸, the inflammatory cytokine, in intestinal cells¹⁶. This may help with modulating the inflammation response in the mucosal microenvironment and preventing stomach ulcers.

Recommended dosage

Soy protein is most used in daily doses of up to 40-60 grams for 4 months up to 6 months. Gastro-AD[®] has been tested in several clinical studies, on approximately 600 subjects. It was shown to be tolerable for Gastro-AD[®] up to 15g per day for 30 days¹⁴. Results show that it provides quick relief from ulcer symptoms including heartburn, pain, vomiting and constipation.

Symptoms of GERD

2g to 5g of Gastro-AD[®], 3 times daily, 30 minutes before meals for 30 days^{14,15}.



Supplement recommendations

Licorice root extract

Mechanism of action

It exerts anti-*H. pylori* activity by inhibiting protein synthesis, DNA Gyrase, and dihydrofolate reductase¹⁷. It also interrupts the inflammatory cascade¹⁸ and possesses antioxidant properties¹⁹.

Benefits

Indigestion

Among various gastrointestinal disorders, functional dyspepsia also known as indigestion is one of the most common clinical conditions among the general population. The general symptoms include upper abdominal fullness, epigastric pain, belching, bloating, early satiety, nausea, vomiting, regurgitation, heartburn, and loss of appetite. Oral licorice might improve symptoms of dyspepsia when used in combination with other ingredients.

Meanwhile, a randomised, double-blind, placebo-controlled study showed that deglycyrrhizinated licorice, DGL (GutGard[®]) helps relieve occasional indigestion²⁰. In the study, the subjects received a specified dose of GutGard[®] for 15 and 30 days, and the severity of the complaint and quality of life significantly improved compared to the placebo group.

Management of *H. pylori*

Most people with *H. pylori* develop chronic gastritis with no symptoms. *H. pylori* can also cause painful ulcers and gastric cancers³. DGL has also been shown to successfully manage *H. pylori*. In a 2013 randomised study, participants with *H. pylori* infection received GutGard[®] supplementation once daily for 60 days. They are tested before and after supplementation using a stool antigen test (HpSA), and ¹³C-urea breath test. The result shows promising results over the placebo group whereby participants with GutGard[®] supplementation tested negative for *H. pylori* over the placebo group²¹.

Recommended dosage

Licorice extract has been tested in several studies over the years with typical dosages from 100mg up to 1000mg in 1-3 divided dosages for 2-24 weeks. DGL (GutGard[®]) 150mg either in a separate dose or a single dose for 30 days up to 60 days^{20,22}.



Supplement recommendations

Probiotics

Mechanism of action

Probiotic mechanisms of action include direct interaction with intestinal microbiota to modify its composition, improving gut barrier function and mucosal immunity, reducing mucosal permeability and competitive exclusion which reduces the colonisation of pathogenic bacteria^{23,24,25}.

Benefits

Gastrointestinal health

Probiotics play an important role in maintaining intestinal microbiota homeostasis and inducing systemic protective responses. It blocks the adherence of pathogens and toxins to the intestinal epithelium by secreting bactericidal substances²⁶. On top of that, probiotics also facilitate short-chain fatty acids production in the gastrointestinal tract which helps to regulate pH and inhibit the activation of NFκB macrophages that can cause inflammatory bowel diseases²⁷. A meta-analysis showed probiotics reduce irritable bowel syndrome and abdominal pain after 8 to 10 weeks of consumption²⁸.

Management of *H. pylori*

Chronic infection with *H. pylori* bacteria is a known risk factor for gastric cancer. Probiotic supplementation increases the eradication of *H. pylori* and reduces the side effect associated with antibiotics and treatment²⁹. Probiotics can inhibit *H. pylori* growth by secreting SCAFs which results in lowering the pH in gastric lumen and create a competitive condition which inhibits the adherence of pathogen adhesion to mucosal layer²⁹.

Recommended dosage

There is currently no established effective probiotic dosage because it can be affected by species, dose and duration of therapy depending on the clinical indication. The concentration of single strain bacteria is recommended to be >1 billion CFU to ensure effectiveness unless with clinical support³⁰.



Diet & lifestyle recommendations

- Maintain a healthy weight
- Have meals at least 2 to 3 hours before lying down³¹
- Eat smaller portion for each mealtime, avoid overeating³¹
- Avoid food and beverages that may trigger heartburn, such as fatty meals, citrus fruits and carbonated drinks³¹
- Sleep on the left side³²

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