

Indigestion, Heartburn, and Low Stomach Acidity

Indigestion refers to any number of gastrointestinal complaints, which can include gas or wind and upset stomach. Heartburn is a burning feeling caused by stomach acid regurgitating into the esophagus from the stomach. If the burning is in the stomach, the problem is not heartburn but indigestion or perhaps gastritis or even a stomach ulcer.

Heartburn: One cause of heartburn is a condition called hiatus hernia. With this condition, a small portion of the stomach gets caught in the sphincter that separates the esophagus from the stomach. A hiatus hernia usually does not require any specific therapy, but any accompanying gastroesophageal reflux should get treatment. This same condition can occur if there is a defective sphincter between the esophagus and the stomach.

According to Jonathan Wright, M.D., and some other doctors of natural medicine, another cause of heartburn can be too *little* stomach acid.¹ This may seem to be a paradox, but based on the clinical experience of doctors such as Dr. Wright, supplementing with betaine HCl relieves the symptoms of heartburn and improves digestion.

Low stomach acidity: Medical researchers since the 1930s have been concerned with the consequences of too little stomach acid (hypochlorhydria). While all the health

consequences are still not entirely clear, some have been well documented.

Many minerals and vitamins require proper stomach acid to be absorbed optimally—examples are iron,² calcium,^{3 4} zinc,⁵ and B-complex vitamins,⁶ including folic acid.⁷ People with achlorhydria (no stomach acid) or hypochlorhydria (low stomach acid) may be at risk for developing certain mineral deficiencies. Since minerals are important not only for body structure (as in bones and teeth) but also to activate enzymes (such as superoxide dismutase) and hormones (such as insulin), deficiencies can lead to health problems.

One of the major tasks of stomach acid is to break proteins down to the point that pancreatic proteolytic enzymes can easily work. If this does not occur, these proteins might be absorbed in more complicated chains. This malabsorption has been suggested by some researchers to be a major cause of immunological stress and food allergies.^{8 9}

In addition, partially digested protein provides a favorable environment for “unfriendly” bacteria that live in the colon.^{10 11} Some of these bacteria produce toxic substances that can be absorbed by the body.

Some researchers have found that people with certain diseases sometimes have an inability to produce enough stomach acid. This does not mean the diseases are caused by too little stomach acid, only that there is a correlation. Jonathan Wright, M.D., will usually test patients’ stomach

acid if they suffer from food allergies, arthritis (both rheumatoid arthritis and osteoarthritis), pernicious anemia (too little vitamin B12), asthma, diabetes, vitiligo, eczema, tic douloureux, Addison's disease, celiac disease, lupus erythematosus, or thyroid disease.¹²

Antacids: To relieve heartburn, some people try antacids, which often provide symptomatic relief. Antacids can have their own side effects as well, since they can interfere with the absorption of some vitamins and minerals.

Nutrients that might be helpful: Lactose intolerance can cause many digestive problems, including gas, cramps, and diarrhea; in such cases, the lactase enzyme can be helpful when taken before consuming dairy products. Pancreatic enzymes, which include lipase, aids in the digestion of fats and acts as a digestive aid.

Probiotics, such as acidophilus, promote healthy digestion. Enzymes secreted by probiotic bacteria also aid digestion. Acidophilus is a source of lactase enzyme, which is needed to digest milk but is lacking in lactose-intolerant individuals.

Double blind research suggests that bismuth subcitrate can relieve indigestion.¹³ However, not all studies agree.¹⁴ Usually 1 teaspoon of liquid bismuth preparations are used two to three times per day, or two 120 mg tablets twice per day.

Are there any side effects or interactions? Refer to the individual supplement for information about any side effects or interactions.

Herbs that may be helpful: Chamomile is effective in relieving inflamed or irritated mucous membranes of the digestive tract. Since heartburn sometimes involves reflux of stomach acid into the esophagus, the anti-inflammatory properties of chamomile are also useful.¹⁵ In addition, chamomile promotes normal digestion.¹⁶ However, modern studies are lacking to prove chamomile beneficial.

Chamomile is typically taken in tea form three to four times per day, between meals. Boiling water is poured over dried flowers and allowed to steep. Other options are to mix 3–5 ml of chamomile tincture with hot water or to take 2–3 grams of chamomile in capsule or tablet form.

Various herbs known as carminatives have been used to relieve symptoms of indigestion, particularly when there is excessive gas. Among the most notable and well-studied of these are peppermint, fennel, and caraway. Double blind studies have shown that combinations of peppermint and caraway oil and a combination of peppermint, fennel, caraway, and wormwood could help people with indigestion.^{17 18} It is believed that carminative agents work, at least in part, by relieving spasms in the intestinal tract.¹⁹ Generally 3–5 drops of natural essential oils or 3–5 ml tincture of any of these herbs taken in water two to three times per day can be helpful. Alternately, a tea can be made by grinding 2–3 teaspoons of the seeds of these plants then

simmering them in a cup of water for ten minutes covered. Drink three or more cups per day just after meals.

Lemon balm is another carminative herb used traditionally for indigestion,²⁰ though it has not been as well studied as peppermint or fennel.²¹ Lemon balm is usually taken as tea, steeping 2–3 teaspoons of leaves in hot water for ten to fifteen minutes in a covered container. Drink three or more cups per day just after meals. Tincture can also be used in the amount of 3–5 ml three times per day.

There are numerous other carminative herbs, including European angelica (*Angelica archangelica*) root, anise, cardamom, cloves, coriander, dill, ginger, rosemary, and sage.²² Many of these are common kitchen herbs and thus are easily available for making tea to calm an upset stomach.

Another potentially beneficial category of herbs for people with indigestion and/or low stomach acid are bitters. Wormwood has already been mentioned above as being used in combination with carminative herbs for people with indigestion.²³ Other important bitters are gentian, dandelion, blessed thistle, yarrow, devil's claw, bitter orange, and centaury.²⁴ These are thought to stimulate digestive function by increasing saliva production and promoting both stomach acid and digestive enzyme production.²⁵ Bitters are taken either by mixing 1–3 ml tincture into water and sipping slowly ten to fifteen minutes before eating, or making tea, which is also sipped slowly before eating.

Some bitters widely used in traditional medicine in North America include yarrow, yellow dock, goldenseal, and Oregon grape. Oregon grape's European cousin barberry is also used as a bitter traditionally. Besides stimulating digestion like other bitters, animal studies indicate yarrow, barberry, and Oregon grape may relieve spasms in the intestinal tract.²⁶

Horehound contains a number of constituents, including alkaloids, flavonoids, diterpenes (e.g., marrubiin), and trace amount of volatile oils.²⁷ The major active constituent marrubium and possibly its precursor, premarrubium, are herbal bitters that increase the flow of saliva and gastric juice, thereby stimulating the appetite.²⁸

Artichoke is a mildly bitter plant and healthy food. Extracts of it have been repeatedly shown in double blind research to be beneficial for people with indigestion.²⁹ Artichoke is particularly useful when the problem is lack of bile production by the liver.³⁰ Extracts providing 500–1,000 mg per day of cynarin, the main active constituent of artichoke, are recommended by doctors of natural medicine.

The bright yellow herb turmeric relieved indigestion problems in a double blind study conducted in Thailand.³¹ Two capsules containing 250 mg turmeric powder were given four times per day.

Licorice protects the mucous membranes lining the digestive tract by increasing production of mucin, a substance that protects against stomach acid and other harmful substances.³² Licorice root in its deglycyrrhizinated form (DGL) has the glycyrrhizic acid removed (glycyrrhizic acid is the portion of licorice root associated with increasing blood pressure and water retention in some persons). The mucous membrane-healing part of the root, however, remains in DGL. One to two chewable tablets of DGL (250–500 mg) can be taken fifteen minutes before meals and one to two hours before bedtime and may provide relief.³³

Boldo was used for a variety of digestive conditions in South America, although this may have stemmed from its impact on intestinal infections or liver function. Studies specifically showing a benefit from taking boldo in persons with indigestion and heartburn have not been performed. A physician knowledgeable in botanicals should be consulted before using boldo to ensure safe use.

People in the southwestern United States and northern Mexico have long turned to a tea made from chaparral to help calm an upset stomach. The strong tasting tea was used in only small amounts. Modern research has not confirmed the usefulness of chaparral for indigestion, and there are serious concerns about the safe use of this herb internally.

Traditionally, elecampane has been used to treat poor digestion and general complaints of the intestinal tract.

Are there any side effects or interactions? Refer to the individual herb for information about any side effects or interactions.

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