



Acid reflux : Causes, treatment and symptoms

Acid reflux is a common condition that features a burning pain, known as heartburn, in the lower chest area. It happens when stomach acid flows back up into the food pipe.

Gastroesophageal reflux disease (GERD) is diagnosed when acid reflux occurs more than twice a week.

Exact figures vary, but diseases resulting from acid reflux are the most common gut complaint seen by hospital departments in the United States.

The American College of Gastroenterology says that over 60 million Americans experience heartburn at least once a month and at least 15 million as often as daily.

GERD is most common in Western countries, affecting an estimated 20 to 30 percent of the population.

Chronic heartburn can lead to serious complications.

Fast facts on acid reflux

Here are some key points about acid reflux. More detail is in the main article.

- ❑ Acid reflux is also known as heartburn, acid indigestion, or pyrosis.
- ❑ It happens when some of the acidic stomach contents go back up into the esophagus.
- ❑ Acid reflux creates a burning pain in the lower chest area, often after eating.
- ❑ Lifestyle risk factors include obesity and smoking.
- ❑ Drug treatments are the most common therapy and are available on prescription and over the counter (OTC).

Causes

Diagram of the digestive system.

Acid reflux is when some of the acid content of the stomach flows up into the esophagus, into the gullet, which moves food down from the mouth. Despite the name, heartburn has nothing to do with the heart.

The stomach contains hydrochloric acid, a strong acid that helps break down food and protect against pathogens such as bacteria.

The lining of the stomach is specially adapted to protect it from the powerful acid, but the esophagus is not protected.

A ring of muscle, the gastroesophageal sphincter, normally acts as a valve that lets food into the stomach but not back up into the esophagus. When this valve fails, and stomach contents are regurgitated into the esophagus, the symptoms of acid reflux are felt, such as heartburn.

Risk factors

GERD affects people of all ages, sometimes for unknown reasons. Often, it is due to a lifestyle factor, but it can also be due to causes that cannot always be prevented.

One cause that is not preventable is a hiatal (or hiatus) hernia. A hole in the diaphragm allows the upper part of the stomach to enter the chest cavity, sometimes leading to GERD.

Other risk factors are more easily controlled:

- ❑ obesity
- ❑ smoking (active or passive)
- ❑ low levels of physical exercise
- ❑ medications, including drugs for asthma, calcium-channel blockers, antihistamines, painkillers, sedatives, and antidepressants

Pregnancy can also cause acid reflux due to extra pressure being placed on the internal organs.

Diet

Food and dietary habits that have been linked to acid reflux include:

- ❑ caffeine
- ❑ alcohol
- ❑ a high intake of table salt
- ❑ a diet low in dietary fiber
- ❑ eating large meals
- ❑ lying down within 2 to 3 hours of eating a meal
- ❑ consuming chocolate, carbonated drinks, and acidic juices

A recent study suggests that dietary choices may be as effective as using proton pump inhibitors (PPIs) in treating acid reflux.

Treatment

The main treatment options for acid reflux are:

- ❑ PPIs, including omeprazole, rabeprazole, and esomeprazole
- ❑ H2 blockers, including cimetidine, ranitidine, and famotidine
- ❑ Over-the-counter treatments, such as antacids.
- ❑ Alginate drugs, including Gaviscon

The main treatment options for people who repeatedly experience acid reflux in GERD are either PPIs or H2 blockers, both of which are medications.

PPIs and H2 blockers decrease acid production and reduce the potential for damage caused by acid reflux.

These medications are generally safe and effective, but like any prescription drug, they are not appropriate for all people with reflux disease and can cause side effects.

For instance, they can cause problems absorbing nutrients. This can lead to malnutrition.

OTC remedies for acid reflux

For people who experience heartburn or indigestion infrequently, perhaps in association with occasional food and drink triggers, OTC treatments to reduce the acidity of the stomach contents are available.

These liquid and tablet formulations are called antacids, and there are dozens of brands available, all with similar effectiveness. They may not work for everyone, and any need for regular use should be discussed with a doctor.

Antacids provide rapid but short-term relief by reducing the acidity of the stomach contents.

They contain chemical compounds such as calcium carbonate, sodium bicarbonate, aluminum and magnesium hydroxide. They can also inhibit nutrient absorption, leading to deficiencies over time.

Alginate drugs such as **Asynta**

Asynta is probably the best-known heartburn therapy. It has a different mode of action than antacid drugs. Alginate drugs such as **Asynta** vary slightly in composition, but they usually contain an antacid.

The alginic acid works by creating a mechanical barrier against the stomach acid, forming a foamy gel that sits at the top of the gastric pool itself.

Any reflux is then relatively harmless as it consists of alginic acid and not damaging stomach acid.

The active ingredient-alginate-is found naturally in brown algae.

Other options

Other possible treatment methods include:

- ❑ Sucralfate acid suppressants
- ❑ Potassium-competitive acid blockers

- ❑ Transient lower esophageal sphincter relaxation (TLESR) reducers
- ❑ GABA(B) receptor agonist
- ❑ mGluR5 antagonist
- ❑ Prokinetic agents
- ❑ Pain modulators
- ❑ Tricyclic antidepressants
- ❑ Selective serotonin reuptake inhibitors (SSRIs)
- ❑ Theophylline, a serotonin-norepinephrine reuptake inhibitor

If GERD is severe and unresponsive to medical treatment, a surgical intervention known as fundoplication may be needed.

Lifestyle

Losing weight and stopping smoking will remove two lifestyle risk factors associated with acid reflux.

Lifestyle measures that may help include:

- ❑ improving posture, for instance, sitting up straighter
- ❑ wearing loose clothing
- ❑ losing weight if overweight or obese
- ❑ avoiding increased pressure on your abdomen, such as from tight belts or doing sit-up exercises
- ❑ stopping smoking

Symptoms

Acid reflux usually produces heartburn, whether it is due to a single episode of overeating or persistent GERD.

Heartburn is an uncomfortable burning sensation that occurs in the esophagus and is felt behind the breastbone area. It tends to get worse when lying down or bending over. It can last for several hours and often worsens after eating food.

The pain of heartburn may move up toward the neck and throat. Stomach fluid can reach the back of the throat in some cases, producing a bitter or sour taste.

If heartburn occurs two or more times a week, it is known as GERD for short.

Other symptoms of GERD include:

- ❑ dry, persistent cough
- ❑ wheezing
- ❑ asthma and recurrent pneumonia
- ❑ nausea
- ❑ vomiting
- ❑ throat problems, such as soreness, hoarseness, or laryngitis (voice box inflammation)
- ❑ difficulty or pain when swallowing
- ❑ chest or upper abdominal pain
- ❑ dental erosion
- ❑ bad breath

Risks and complications

Without treatment, GERD can lead to serious complications in the long term, including an increased risk of cancer.

Persistent exposure to stomach acid can damage the esophagus, leading to:

- ❑ **Esophagitis:** the lining of the esophagus is inflamed, causing irritation, bleeding, and ulceration in some cases
- ❑ **Strictures:** damage caused by stomach acid leads to scar development and difficulties swallowing, with food getting stuck as it travels down the esophagus
- ❑ **Barrett's esophagus:** a serious complication where repeated exposure to stomach acid causes changes in the cells and tissues lining the esophagus with potential to develop into cancer cells

Both esophagitis and Barrett's esophagus are associated with a higher risk of cancer.

During pregnancy

In the U.S., 30 to 50 percent of women experience heartburn during pregnancy, even if they did not have it before.

Lifestyle modifications are recommended during pregnancy, such as not eating too late at night and consuming small meals.

Any woman who is experiencing severe reflux during pregnancy should speak to her doctor about treatment options.

Diagnosis

Acid reflux and heartburn are common and relatively easy to diagnose, however, they can be confused with other chest complaints such as:

- ❑ heart attack
- ❑ pneumonia
- ❑ chest wall pain
- ❑ pulmonary embolus

GERD is often diagnosed simply by finding no improvement in heartburn symptoms in response to lifestyle changes and acid reflux medication.

Gastroenterologists may also arrange the following investigations:

- ❑ **endoscopy:** camera imaging
- ❑ **biopsy:** taking a tissue sample for laboratory analysis
- ❑ **barium X-ray:** imaging the esophagus, stomach, and upper duodenum after swallowing a chalky liquid that helps provide contrast on images
- ❑ **esophageal manometry:** pressure measurement of the esophagus
- ❑ **impedance monitoring:** measuring rate of fluid movement along the esophagus
- ❑ **pH monitoring:** acidity testing

Reference : <https://www.medicalnewstoday.com/articles/146619.php>

Ten causes of epigastric pain

Epigastric pain is felt in the middle of the upper abdomen, just below the ribcage. Occasional epigastric pain is not usually a cause for concern and may be as simple as a stomach ache from eating bad food.

There are many common digestive problems associated with epigastric pain, as well as a range of other underlying conditions that can cause pain in that area.

Serious cases may be life-threatening, and it is important to work with a doctor to understand the difference between a simple cause of epigastric pain and a more serious underlying condition.

Epigastric pain is a common symptom of an upset stomach, which can be due to long-term gastrointestinal problems or just the occasional bout of indigestion.

1. Indigestion

Epigastric pain is felt just under the ribcage and is generally not a cause for concern.

Indigestion usually occurs after eating. When a person eats something, the stomach produces acid to digest the food. Sometimes, this acid can irritate the lining of the digestive system.

Indigestion can cause symptoms such as:

- ❑ burping
- ❑ bloating in the abdomen
- ❑ feeling full or bloated, even if the portion size was not big
- ❑ nausea

These symptoms are often felt alongside epigastric pain. While indigestion happens to everyone from time to time, it may be a sign that a person is intolerant of something they have recently eaten.

2. Acid reflux and GERD

Acid reflux occurs when the stomach acid used in digestion gets backed up in the food pipe (esophagus). Acid reflux usually causes pain in the chest and throat, which is commonly known as heartburn. This feeling may accompany epigastric pain or be felt on its own.

Other common symptoms of acid reflux include:

- ❑ indigestion
- ❑ burning or aching chest pain
- ❑ feeling like there is a lump in the throat or chest
- ❑ an acidic or a vomit-like taste in the mouth
- ❑ a persistent sore throat or hoarse voice
- ❑ a persistent cough

Ongoing acid reflux can damage the food pipe and may cause gastroesophageal reflux disease, or GERD. People with GERD experience epigastric pain and symptoms of indigestion frequently and may require treatment and dietary changes to manage the condition.

Some cases of GERD can lead to a condition called Barrett's esophagus, where the tissue of the food pipe starts to look like the tissue in the intestines.

3. Overeating

The stomach is very flexible. However, eating more than necessary causes the stomach to expand beyond its normal capacity.

If the stomach expands considerably, it can put pressure on the organs around the stomach and cause epigastric pain. Overeating can also cause indigestion, acid reflux, and heartburn.

4. Lactose intolerance

Lactose intolerance can be another cause of epigastric pain. People who are lactose intolerant have trouble breaking down lactose, a sugar found in milk and other dairy products.

For people with lactose intolerance, eating dairy can cause epigastric pain and other symptoms, including:

- ❑ stomach pains
- ❑ cramps and bloating
- ❑ gas
- ❑ nausea or vomiting
- ❑ diarrhea



People with lactose intolerance cannot metabolize lactose properly. If they consume foods containing lactose, they may experience bloating, flatulence and diarrhea.

5. Drinking alcohol

Moderate drinking is usually not enough to upset the stomach or intestines. However, drinking too much alcohol at once or excess alcohol over long periods of time can cause inflammation in the lining of the stomach. This inflammation can lead to epigastric pain and other digestive issues.

6. Esophagitis or gastritis

Esophagitis is inflammation of the lining of the food pipe. Gastritis is inflammation of the lining of the stomach. Esophagitis and gastritis can be caused by acid reflux, infections, and irritation from certain medications. Some immune system disorders may also cause inflammation.

If this inflammation is left untreated, it can create scar tissue or bleeding. Other common symptoms include:

- ❑ acidic or vomit-like taste in the mouth
- ❑ persistent cough
- ❑ burning in the chest and throat

- ❑ trouble swallowing
- ❑ nausea
- ❑ vomiting or spitting up blood
- ❑ poor nutrition

7. Hiatal hernia

A hiatal hernia occurs when part of the stomach pushes up through the diaphragm and into the chest. This may be due to an accident or weakened diaphragm muscles.

In addition to epigastric pain, other common symptoms of hiatal hernias include:

- ❑ sore throat
- ❑ irritation or scratchiness in the throat
- ❑ trouble swallowing
- ❑ gas or especially loud burps
- ❑ chest discomfort

Hiatal hernias typically affect older people and may not cause epigastric pain in every case.

8. Peptic ulcer disease

Peptic ulcer disease is when the lining of the stomach or small intestine has been damaged by a bacterial infection or by taking too much of certain medications, such as nonsteroidal anti-inflammatory drugs (NSAIDs).

Symptoms of peptic ulcer disease can include epigastric pain and signs of internal bleeding, such as stomach pain, fatigue, and shortness of breath.

9. Gallbladder disorder

Issues with the gallbladder may also cause epigastric pain. Gallstones may be blocking the opening of the gallbladder, or the gallbladder may be inflamed. Specific gallbladder symptoms can include:

- ❑ intense pain near the upper right side of the stomach after eating
- ❑ clay-colored stool
- ❑ jaundice or yellowing skin
- ❑ loss of appetite
- ❑ gas and bloating

10. Pregnancy

It is very common to feel mild epigastric pain during pregnancy. This is commonly caused by acid reflux or pressure on the abdomen from the expanding womb. Changes in hormone levels throughout pregnancy can also aggravate acid reflux and epigastric pain.

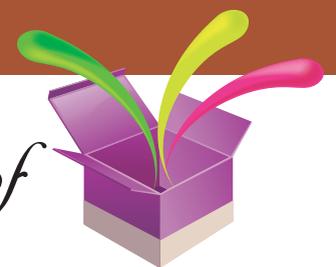
Severe or persistent epigastric pain during pregnancy can be a sign of a more serious condition, so a woman should visit her doctor if experiencing any unusual symptoms.

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(December, 2017 Volume : 10 Issue : 2)

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Editorial Note:

Dear Doctor, It's our immense pleasure to inform you that we have published the First issue, 2018 of *GI Café*. In this issue we try to focus on Acid reflux : Causes, treatment and symptoms & Ten causes of epigastric pain. Your comments and suggestions will enrich our upcoming issues. Please participate in quiz competition and win prizes.

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