



## X-Plain GERD

### Reference Summary

#### Introduction

Gastro-Esophageal Reflux Disease, or GERD, is a fairly common condition that affects millions of people in the United States. Its main symptoms are heartburn, a burning sensation in the chest, and occasionally a bitter taste in the mouth.

GERD can have many causes. Fortunately, treatment is available to help relieve the symptoms.

This reference summary will help you better understand the symptoms and treatment options for GERD.

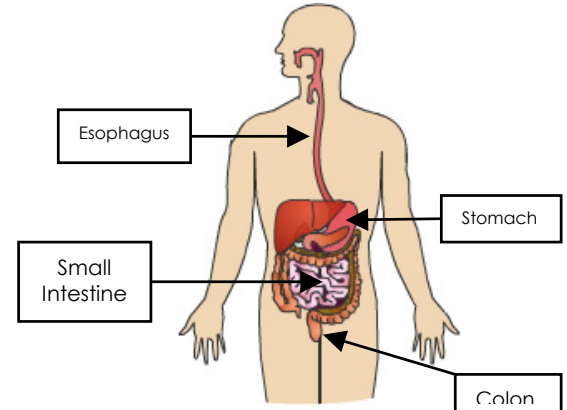
#### Anatomy

After swallowing, food goes through a long tube, called the esophagus, to the stomach.

In the stomach, acids start breaking down the food.

This process is known as digestion.

Acids, or gastric juices, are usually confined to the stomach, where they are blocked from going up to the esophagus by a valve mechanism. The valve mechanism is made of two muscles that help prevent the backflow, or reflux, of the stomach content and juices into the esophagus.



The first muscle is found in the area that separates the esophagus from the stomach. This area is called the gastro-esophageal junction; also known as Lower Esophageal Sphincter or LES. This muscle allows food to go into the stomach but not back into the esophagus.

The second muscle is the diaphragm, a very large muscle that separates the lungs from the abdomen and helps with breathing. The hole in the diaphragm through which

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the esophagus goes into the abdomen is known as the “hiatus.” The hiatus also helps prevent the backflow of juices from the stomach into the esophagus.

If these muscles do not function properly, gastric juices can go back into the esophagus and cause heartburn. This is known as gastro-esophageal reflux.

The lining of the stomach is made up of cells that can tolerate acids. The esophagus lining, however, is unable to tolerate these digestive acids.

## Causes And Effects

If the valve mechanism that stops digested food in the stomach from flowing back up the esophagus does not function properly, acid juices are able to go up into the esophagus and can sometimes reach the mouth.

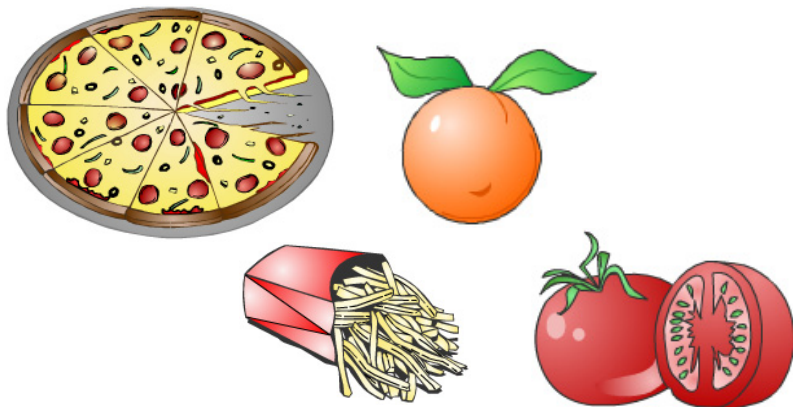
This acid can irritate, destroy, and scar the lining of the esophagus.

From the mouth area, the acid juices can flow into the lungs. The effects of the acid juices on the esophagus, mouth, and lungs are what cause the symptoms of GERD.

The main cause of GERD is the weakness of the LES, the lower esophageal sphincter. Some chemicals, such as caffeine, nicotine, alcohol, and chocolates, can cause this weakness.

GERD can be caused or aggravated by food such as:

- Citrus fruits
- Fatty and fried foods
- Garlic and onions
- Mint flavorings
- Spicy foods
- Tomato-based foods like spaghetti sauce, chili and pizza
- Vinegar



Being overweight can also cause GERD. Pregnant women can also experience GERD.

Other medical conditions, such as hiatal hernias, increase the likelihood of GERD.

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Hiatal hernias cause the junction between the esophagus and the stomach to be inside the chest, above the level of the diaphragm. In these cases the diaphragm is unable to help in the prevention of reflux.

## Signs And Symptoms

Typically GERD causes significant heartburn. If the juices from the stomach reach the mouth, they cause a bitter and acidic taste. Occasionally severe middle back pain can also be caused by GERD.

The back pain can mimic symptoms of a heart attack.

Symptoms are usually worse when the patient lies down. This allows more juices to flow back from the stomach to the esophagus.

Some patients may also have coughing spells when they lie down. Acid juices that flow back up the esophagus then down into the lungs through the breathing tube cause this. Coughing tries to expel these destructive juices from the lungs.

To restrict the flow of juices back to the mouth, patients with GERD may prefer to sleep with their heads up, or even in a sitting position. If left untreated, the acids can destroy the lining of the esophagus. This could cause significant medical problems.

Other medical conditions can cause symptoms similar to those caused by GERD. Your physician will help determine the exact cause of your symptoms.

Heart attacks can present symptoms of chest pressure and heartburn similar to those experienced by patients with GERD. Ulcers in the stomach or the small intestines can also cause similar symptoms. Rarely, gall bladder and pancreas problems can also cause similar pain.

After taking a detailed medical history and doing a physical examination, your doctor may order further medical tests to determine the cause of your symptoms. If your doctor diagnoses GERD, several treatment options are available.

Because very serious diseases, such as heart problems, have symptoms that resemble those of GERD, people who have GERD symptoms should seek medical



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advice. Your doctor will diagnose the condition and make sure that the symptoms are not caused by life-threatening conditions such as heart problems or cancer.

Your doctor may recommend some tests, such as a scope of the stomach. This test takes pictures of the inside of the stomach. Other tests can determine the acidity inside the esophagus.

X-ray tests of the esophagus and stomach, chest x-rays, and cardiac tracings, or EKG, may also be necessary.

## Treatment Options

The first treatment option usually includes some lifestyle changes. These include limiting the following items that can cause and worsen the symptoms of GERD:

- Alcohol
- Chocolates
- Caffeine
- Smoking
- Carbonated drinks
- Fatty or spicy food
- Onions
- Mint
- Citrus fruits
- Tomatoes and their byproducts

Sleeping with one or two pillows may also be tried. As an alternative, patients can prop up the head of their bed with wooden blocks.

For overweight patients, losing weight can sometimes help reduce the symptoms of GERD.

Not wearing tight clothes or belts and avoiding unnecessary bending can also decrease the symptoms associated with GERD.



Another treatment includes slowly eating small amounts of food. Eating large amounts of food very rapidly increases the pressure inside the stomach and worsens the symptoms of GERD. Avoiding lying down after a meal will give the stomach enough time to empty and can decrease some symptoms of GERD.

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If the symptoms persist after trying these lifestyle changes, medication may be recommended. Medication may help to:

- Decrease the acidity of the stomach with over-the-counter and prescription antacid medications and
- Strengthen the LES.

Some of these medications can have significant side effects. It is very important to tell your doctor or pharmacist about any medical conditions you have had and medication you are taking.

If the non-surgical treatments are unsuccessful, surgery may be recommended.

Most patients with GERD improve with some lifestyle changes and medication. Surgery is usually not necessary.

### Complications

If GERD is left untreated, complications of GERD include inflammation of the esophagus, stomach ulcers, and the increased risk of esophageal cancer.

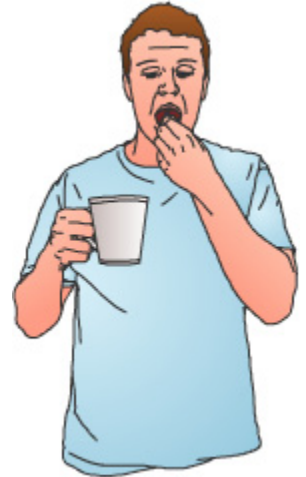
Scarring that may narrow the esophagus can also occur. This is known as esophageal strictures. Esophageal strictures make swallowing very difficult.

If the GERD is very severe, it can cause chronic inflammation of the lungs and breathing problems.

### Summary

GERD is a very common medical condition. Treatment is very successful but depends largely on the patient changing some dietary and lifestyle habits.

Medical treatment can also reduce the symptoms of GERD. Because some medications can cause potentially life-threatening interactions with other commonly prescribed medications, it is very important to check with your doctor and pharmacist before taking any new medication, even over-the-counter medication.



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