

## Esophagitis

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**Received:** November 04, 2019; **Published:** December 02, 2019

Esophagitis is an inflammatory process that affects the esophageal tissue. Esophagitis often causes difficulty in swallowing, pain or heartburns.

Treatment always depends on the cause of the disease and the severity of the tissue lesions.

### Symptoms may include

- Heart Burn
- Chest pain
- Swallowing difficulties
- Dry cough
- Itching in the throat, sore throat
- Regurgitation (return) of food or acid reflux (acid reflux)
- Sensation of a knot in the throat

**Esophagitis can be caused by several factors, in some cases they may be associated**

### Esophageal reflux

It is by far the most common form of esophagitis. A valve-like structure called the lower esophageal sphincter (LES) prevents stomach acid from returning to the esophagus. If this sphincter opens when it should not or should not close properly the contents of the stomach will reflux into the esophagus (gastro-esophageal reflux). When this gastroesophageal reflux occurs frequently the constant acid reflux can irritate the esophageal mucosa, causing inflammation (esophagitis). Over time, inflammation can lead to esophageal erosions (mucosal wounds), even ulcers, which can be complicated by bleeding or respiratory problems.

Risk factors:

- Obesity
- Hiatal hernia
- Smoking

- Asthma
- Diabetes
- Delayed emptying of the stomach
- Connective tissue diseases, such as Scleroderma
- Pregnancy

A number of foods can aggravate the symptoms of reflux esophagitis, most commonly:

- Tomatoes
- Citruses
- Alcohol
- Caffeine
- Onions, garlic, spicy spices
- Chocolate
- Mint

### Eosinophilic esophagitis

Eosinophils are components of the white blood cells (leukocytes) involved in the inflammatory process, with a predominant role in allergic reactions. Eosinophilic esophagitis occurs when there is a high concentration of such cells in the esophageal wall, most likely in response to an allergy-causing agent (allergen). In most cases, people suffering from this type of esophagitis are allergic to one or more foods. There are certain foods that can cause eosinophilic esophagitis, among them: milk, eggs, wheat, rye, peanuts, beans. People with eosinophilic esophagitis may also have food-related allergies, such as inhalation allergens, such as pollen.

### Risk Factors

family history - the presence of this condition in the patient's family, suggesting that a particular gene or certain genes may increase the risk of this condition. family history of allergies, allergic / atopic terrain of the patient.

### Drug-induced esophagitis

Certain medications can cause esophageal mucosal injury if they remain in contact with the esophageal mucosa for a long period, for example, if a pill is swallowed without water, or too little of it, the pill itself or a part of it may remain in the esophagus. The following types of medications are considered as potential causes of esophagitis. Drugs that have been linked to esophagitis include:

- Anti-inflammatory drugs such as aspirin, ibuprofen, naproxen.
- Antibiotics, such as tetracycline and doxycycline
- Potassium chloride
- Bisphosphonates, including Alendronic acid (Fosamax), used in the treatment of osteoporosis.

### Risk factors

- Conditions that prevent the rapid and complete passage of pills into the stomach, such as.
- Swallowing a pill without water or with too little water
- Administration of oral drugs from supine position
- Administration of drugs just before bedtime, probably due to the lower production of saliva, which leads to a lesser quantity of saliva ingested during sleep
- Old age, possibly through changes in the motility of the esophageal musculature and the decrease in saliva production in the elderly.
- Large or more special pills that are difficult to swallow.

### Infectious esophagitis

Esophagitis can also be caused by bacterial, viral, fungal or parasitic infections. Infectious esophagitis is relatively rare and is more commonly found in patients with low immunity, such as those infected with HIV or affected by cancer, diabetes. A fungus present in the mouth (*Candida albicans*) is a common cause of infectious esophagitis (esophageal candidiasis), being most often linked to the use of antibiotics.

### Risk factors

Low immunity caused by various conditions such as HIV infection, AIDS or cancer treatments, drugs that block the immune system in transplanted patients (immunosuppressants), various immunological diseases.

### Complications

Over time, chronic inflammation of the lower esophagus can lead to complications such as:

- Narrowing of the esophagus (esophageal strictures) - by forming an area of scar tissue. Esophageal stricture may cause difficulty swallowing.
- Esophageal ulcer (a deep wound of the esophageal mucosa) with risk of bleeding or perforation, causing pain, and Swallowing difficulty.
- Precancerous changes of the esophagus (Barrett's esophagus) - when there are reddish extensions of the gastric mucosa in the esophagus that are associated with risk of esophageal cancer. The risk of cancer is low, but endoscopy follow-up with regular biopsies is recommended to show early signs of malignant transformation.

### Tests and diagnostics

If you are uncomfortable with the symptoms of GERD, your doctor may only be able to diagnose you based on the symptoms described by you. In some cases, however, your doctor may suggest certain procedures and tests to make a correct diagnosis, such as:

- A barium transit (barium x-ray) of the upper digestive tract. For this procedure, the patient must swallow a chalk-like liquid (barium) that highlights the lining of the digestive tract on radiography and any abnormalities (thickening, ulcers). It can provide information on food transit (depending on how the barium passes through the various digestive segments), including reflux in the esophagus, narrowing of the esophagus, or other abnormalities that may cause the symptoms. And it can diagnose conditions such as hiatal hernia.
- Upper digestive endoscopy. It is a method of direct visualization of the inside of your esophagus (as well as the stomach and duodenum) using a flexible endoscope that is provided with a video camera and a light source, allowing the doctor to examine the esophageal mucosa and, if necessary, obtain a tissue sample (biopsy) to be sent for microscopic examination of cellular changes (histopathological examination).
- Esophageal Ph-metry - a test that monitors the amount of acid in the esophagus by means of a special device (ph-meter), identifying when and how long the acid is refluxing into the esophagus. The Ph-meter is usually a thin catheter that is inserted through the nose to the level of the esophagus, a tube that is connected to a device for recording acidity variations.

- Manometry - a test that assesses the motility (movements) and pressure in the esophagus, by placing a catheter in the esophagus through the nose.
- Allergy Tests - It may be necessary to determine if you are allergic to certain foods or other allergens, which could cause eosinophilic esophagitis.
- Elimination diets - the doctor may recommend that you avoid certain foods, especially those known as having a potential allergen.
- Skin tests - in this test, small amounts of allergenic substance are contacted with the surface of the patient's skin and allowed to act for about 15 minutes to see if there is any sign of allergic reaction (redness, itching, swelling).
- Maintaining a normal body weight or losing weight in obese or overweight people. Excess weight causes increased pressure in the abdomen, pushing the stomach into the chest and causing acid reflux into the esophagus.
- Avoiding clothes that are too tight. These can cause pressure in the abdomen and weaken the lower esophageal sphincter.
- Avoid foods and drinks that can cause burns - usually fats, fries, alcohol, chocolate, peppermint, onions, garlic, spicy spices, coffee, carbonated drinks, tomatoes, citrus.
- Avoid horizontal position immediately after the meal. Do not lie in bed after eating, but wait at least 3 hours before going to bed. It is also good not to lean down immediately after meals and generally avoid lifting weights.
- Changing the sleeping position. If you have burns at night, you can try to use gravity and sleep higher than your torso - tilting the bed or mattress or adding more pillows.
- Avoiding smoking. Smoking decreases the pressure and ability of the lower esophageal sphincter to function properly.

### Treatment

#### Esophageal reflux

##### Pharmaceutical treatment

The first drugs that are usually given are different types of antacids that neutralize the acid at the moment (Dicarbocalm, Maalox, Gaviscon), but cannot cure esophageal inflammation. As side effects, they can cause constipation or diarrhea. If you do not get relief from these symptoms, your doctor will recommend medications that reduce gastric acid production (H2 inhibitors: Ranitidine, Famotidine, or Proton pump inhibitors: Omeprazole, Pantoprazole, Esomeprazole). Their effect is not as rapid as that of antacids, but they are long lasting and are able to cure mucosal inflammation and prevent any complications.

Other medications that are used are those that strengthen the lower esophageal sphincter (prokinetic medicines: Motilium, Metoclopramid) - helps in quicker emptying of the stomach and tightening of the valve between the stomach and esophagus.

##### Surgical treatment

In case the medications are no longer having the expected effect, the doctor may recommend you more invasive methods such as the surgical ones, the most known surgical intervention for this condition being the Nissen fundoplication (the upper part of the stomach is wrapped around the outer portion of the esophagus) to narrow the lower esophageal sphincter).

##### Changing diet and lifestyle

- Changes in diet and lifestyle are just as important as medication.

#### Eosinophilic esophagitis

Eosinophilic esophagitis is treated primarily by avoiding the allergenic agent and reducing allergic reactions with the help of specific medication.

##### Oral corticosteroid drugs

- They reduce the inflammation associated with allergic reactions and allow the healing of the esophageal mucosa. Adverse reactions associated with the long-term use of steroids may be quite severe. These effects may include loss of bone density, slowing growth in children, diabetes, acne, mood disorders. To minimize these side effects, your doctor may prescribe inhaled steroids first. but the preparation should be swallowed (to reach the esophagus) rather than inhaled. In this way. Steroids cause fewer side effects.
- Proton pump inhibitors: Often, eosinophilic esophagitis also has an acid reflux component, which is why the doctor will often combine medication that blocks the production of hydrochloric acid in the stomach, such as esomeprazole, pantoprazole, lansoprazole or omeprazole.
- Restrictive diet: If your tests have shown that you have allergies to certain foods, you will need to remove those foods from your diet.

### Drug-induced esophagitis

Treatment for drug-induced esophagitis is represented by avoiding the trigger drug when possible and reducing the risk by educating patients on the correct administration of the drugs. Your doctor will probably recommend:

- Take an alternative medication to the one that caused your esophagitis, which has a lower risk of causing esophagitis
- Administer the drug in the form of solution or liquid if possible
- Drink a full glass of water when you administer the pill unless the doctor told you to restrict the amount of fluids ingested due to another condition you are suffering from, e.g. (kidney disease, decompensated cirrhosis, etc.)
- Stay standing or sitting (not lying down) for at least 30 minutes after ingesting the pill.

### Esophagitis infection

This form usually has a specific treatment that will be prescribed by your doctor, depending on the bacterial, viral, fungal or parasitic cause of esophagitis.

**Volume 3 Issue 1 January 2020**

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