

Hiatus Hernia

What is a hiatus hernia?

The diaphragm is a sheet of muscle that separates the lungs from the abdomen. The left half of the diaphragm contains a small hole (hiatus) through which passes the food pipe or esophagus. Normally this hole fits snugly around the esophagus. The J-shaped stomach sits below the diaphragm. Hiatus hernia is a condition in which the upper portion of the stomach protrudes into the chest cavity through the esophageal hiatus.

What causes a hiatus hernia?

In some people, the hiatus in the diaphragm weakens and enlarges; it is not known why this occurs. In some patients it may be due to heredity while in others it may be caused by obesity, exercises such as weightlifting, or straining at stool. Whatever the cause, a portion of the stomach herniates, or moves up, into the chest cavity through this enlarged hole producing a hiatus hernia. Hiatus hernias are very common and occur in up to 60% of people by the age of 60.

What are the types of hiatus hernia?

There are 2 types of hiatus hernia.

- **The sliding type:** As its name implies, occurs when the junction between the stomach and esophagus slides up through the esophageal hiatus when the pressure in the abdominal cavity increases. When the pressure is relieved, the stomach falls back down with gravity to its normal position.
- **The rolling or paraesophageal type:** In this type of hernia a portion of the stomach remains stuck in the chest cavity and does not come back to its normal position below the diaphragm.

What signs and symptoms does it produce?

Hiatus hernias, especially the sliding type, do not produce symptoms in most patients. When symptoms do occur they may only be heartburn and regurgitation as a result of the acid in the stomach refluxing back into the esophagus (gastro-esophageal reflux). Belching, coughing and hiccups may be other symptoms related to hiatus hernia. In some patients longstanding reflux of acid into the esophagus may cause injury to and bleeding from the lining of the esophagus. This causes anaemia or a low red blood cell count. Further, chronic inflammation of the lower esophagus may produce narrowing (stricture) in this area. This, in turn, makes swallowing difficult, and food does not pass easily into the stomach. At times, a paraesophageal hiatus hernia causes chest or upper abdominal pain when the stomach becomes trapped above the diaphragm through the narrow esophageal hiatus. The patient may get persistent vomiting and become unwell if the blood supply of the trapped stomach is cut off. This becomes a medical emergency. Although a hiatus hernia can cause chest pain very similar to heart pain do not assume that such pain is caused by the less serious condition of the two. When in doubt, it is safer to be seen by a doctor immediately in order to rule out more problems related to the heart.

What examination and tests will I need?

Diagnosis of a hiatus hernia is typically made with an xray test called barium swallow and meal. The patient is made to drink a glassful of contrast and a series of x-rays films are obtained. The x-rays show whether the stomach or a part of it lies above the diaphragm muscle and thus whether a person has a hiatus hernia. Most patients also require an upper gastrointestinal endoscopy, in which the doctor visually examines the esophagus and stomach using a flexible telescope. Sometimes a CT scan may be required to find out which part of the stomach has slipped up into the chest.

What are the possible complications of hiatus hernia?

Hiatus hernia can cause following complications:

- Chronic heartburn and inflammation of the lower esophagus, called reflux esophagitis
- Anaemia due to bleeding over a period of time from the lower esophagus
- Scarring and narrowing of the lower esophagus (stricture) causing difficulty in swallowing
- While sleeping, stomach secretions can seep up the esophagus and into the lungs causing chronic cough, wheezing, and even pneumonia
- In addition, the complicated hernia can cause serious problems such as difficulty in breathing or severe chest pain, especially in the elderly.
- In case of the paraesophageal hernias portion of the stomach that is stuck in the chest is likely to undergo a twist (volvulus). If this happens the blood supply to the stomach can get cut off producing a serious and life threatening emergency.

What are the treatment options?

Patients who have a sliding hiatus hernia and associated gastroesophageal reflux disease are often advised some lifestyle modifications and medication as the first line of treatment.

Lifestyle modifications

- Avoid foods or substances that increase reflux of acid into the esophagus, such as:
 - Nicotine (cigarettes)
 - Caffeine or coffee
 - Chocolate
 - Fatty or oily foods
 - Alcohol
- Eat smaller, more frequent meals
- Not to eat within 2-3 hours of bedtime
- Avoid bending, stooping, abdominal exercises or tight belts all of which increase abdominal pressure and cause reflux
- If overweight, lose weight as obesity is likely to increase abdominal pressure
- At nighttime elevate the head end of the bed 8 to 10 inches by putting pillows or a wedge under the upper part of the mattress. Gravity helps keep stomach acid out of the esophagus while sleeping

Drugs: Some patients with severe symptoms may be prescribed drugs to reduce the secretion of stomach acid or to increase the muscle strength of the lower esophagus, thereby reducing acid reflux.

When is surgery required for hiatus hernia?

All patients with hiatus hernia do not require surgery. For patients with a sliding hiatus hernia surgery is required only if the patient has severe symptoms of gastroesophageal reflux, is unwilling to take longterm medication, cannot tolerate long term medication or develops complications such as stricture. On the other hand, patients diagnosed to have a rolling or paraesophageal hernia are advised surgery even if they do not have symptoms as this type of hernia is likely to produce serious and life-threatening complications

How is laparoscopic surgery performed in patients with hiatus hernia?

Laparoscopic repair for sliding hiatus hernia: This technique of hernia repair is performed under general anaesthesia. Your surgeon will make a small (1cm) incision in the upper abdomen and introduce a cannula or a tube inside the abdomen. He will insert a telescope attached to a miniature video camera through the cannula that gives him and the operating team a magnified view of your internal organs on a video monitor. He will then place four other additional cannulas through tiny (5mm) cuts to accommodate special long instruments. At the surgery, the widened hiatus through which the stomach slips into the chest is narrowed adequately and a collar-like wrap is created by wrapping a part of the

stomach around the lower esophagus (fundoplication) that acts as a valve. This prevents the acid from the stomach from coming back into the esophagus.

Laparoscopic repair for rolling hiatus hernia: This technique of hernia repair is performed under general anaesthesia. As is done with the sliding hiatus hernia, four to five tiny cuts are made in the upper abdomen and a telescope and instruments are passed inside the abdomen. The stomach that has slipped into the chest is pulled back into the abdomen. The wide gap in the diaphragm muscle through which the stomach has slipped up is narrowed with sutures or by placing a mesh (net) over it. The upper part of the stomach is then wrapped around the esophagus (fundoplication)

What happens after the operation?

You will be kept fasting for about 24 hours after surgery and for that period you are given a saline drip. On the first day of recovery you may experience some nausea but this soon passes away. Most patients are discharged within 48 – 72 hours of surgery and are able to get back to normal activity within 8 – 10 days.

What about the pain after surgery?

After any laparoscopic operation there is some pain at the site of the cuts for the first 24 – 48 hours. With the laparoscopic operation this is much less as compared to the open repair. You will be prescribed medicines to control the pain. Also, you will be encouraged to get out of the bed soon after the operation despite the slight discomfort. Over a period of time the pain will gradually reduce and become almost negligible.

Advantages of laparoscopic hernia repair

- Less pain from the incisions after surgery
- Shorter hospital stay
- Shorter recovery time
- Faster return to normal diet
- Faster return to work or normal activity
- Better cosmetic healing

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