

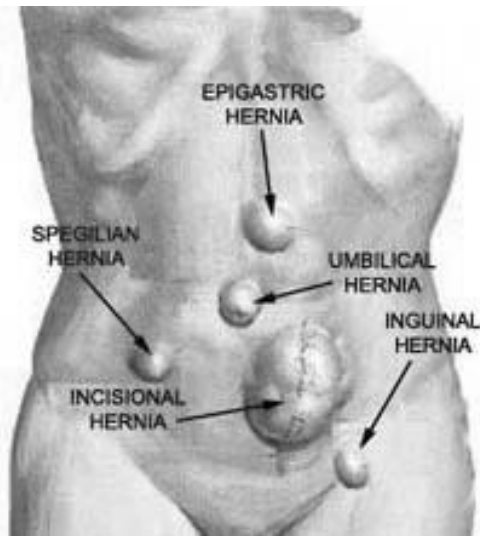
HERNIA

A **hernia** is a protrusion (bulge) of abdominal viscera through a weakened part of the abdominal wall. A hernia does not get better over time, nor will it go away by itself (except for very small congenital navel hernia). It always becomes bigger with time.

When an organ within the abdomen pushes out an opening or weak area in the abdomen wall it is called an **external hernia**. External hernias create a bulge under the skin that can be seen and felt. Examples of external hernias include umbilical (naval) hernias, femoral hernias, and inguinal (groin) hernias.

Internal hernias involve part of an organ within the abdomen pushing through an opening in the wall of another organ in the abdomen. They do not form a bulge under the skin and can therefore not be felt. Many internal hernias are often not detected until they become painful, incarcerated, or strangled of the blood supply.

Hernia Types



In an **inguinal hernia**, the intestine or the bladder protrudes through the abdominal wall or into the inguinal canal in the groin. About 96% of all groin hernias are inguinal, and most occur in men because of a natural weakness in this area.

In an **incisional hernia**, the intestine pushes through the abdominal wall at the site of previous abdominal surgery. This type is most common in elderly or overweight people who are inactive after abdominal surgery.

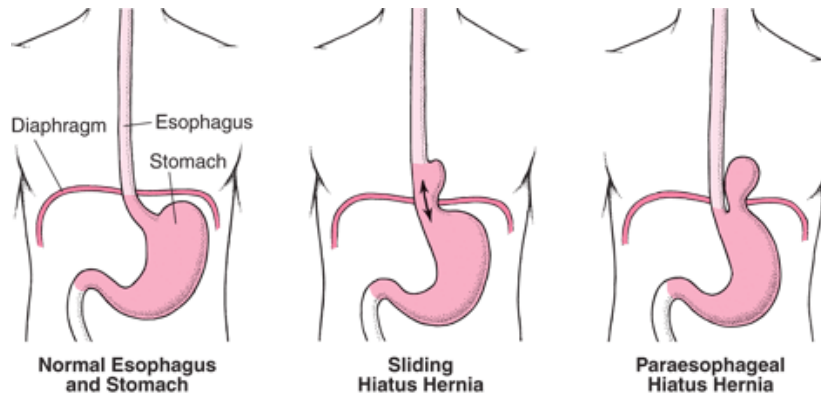
A **femoral hernia** occurs when the intestine enters the canal carrying the femoral artery into the upper thigh. Femoral hernias are most common in women, especially those who are pregnant or obese.

In an **umbilical hernia**, part of the small intestine passes through the abdominal wall near the navel. Common in newborns, it also commonly afflicts obese women or those who have had many children.

ASpigelian hernia: This rare hernia occurs along the lateral (outer) edge of the rectus abdominus muscle, which is several inches to the side of the middle of the abdomen.

An **Epigastric hernia**: Occurring between the navel and the lower part of the rib cage in the midline of the abdomen, epigastric hernias are usually composed of fatty tissue and rarely contain intestine.

A **hiatal hernia** happens when the upper stomach squeezes through the hiatus, an opening in the diaphragm through which the esophagus passes.



Occurrence of Hernia

Hernia	Frequency
Groin Hernia	approx 75%
Incisional Hernia	approx 10%
Umbilical Hernia	approx 10%
Other Hernias	approx 5%

Causes of hernia

The risk of hernia increases with age and they are more common in men than in women.

A hernia can be **congenital**- present at birth – or **acquired** due to a weakness/defect in the abdominal wall.

Activities and medical problems that increase pressure on the abdominal wall can lead to a hernia. These include:

- Straining on the toilet/constipation
- Straining to urinate
- Persistent cough or sneezing
- Strain from heavy lifting
- Physical exertion
- Obesity or sudden weight gain

Other causes

- Enlarged prostate
- Abdominal fluid
- Peritoneal dialysis
- Undescended testicles.
- Poor nutrition
- Smoking

Symptoms of hernia

Hernias can occur suddenly and without warning. Depending on the hernia's anatomical location as well as its cause, symptoms can range from asymptomatic to severe.

In most cases, hernias are painless swellings/lump that remains *asymptomatic* and needing no immediate medical attention. In very mild cases, hernias can even heal spontaneously. Due to a hernia's asymptomatic properties, an affected individual may not always realize that he or she even has a hernia.

Symptoms for **internal hernias** can often be mistaken for that of other medical conditions, as they generally lack the physical signs of external hernias. For example:-

- *Spinal hernias* can have neurological symptoms such as sciatica, incontinence, problems walking, numbness, pain or tingling in the limbs.
- *Diaphragmatic and hiatal (diaphragm) hernias*, symptoms may be similar to that of acid reflux or heartburn, accompanied by chest pains and blood in stool.

Mild, moderate and severe forms of hernia can become painful, and are often accompanied by specific symptoms unique to the anatomical site of occurrence. For **internal hernias**, symptoms may be more dispersed and harder to pinpoint compared to those of external hernias. It is best to see a doctor when symptoms occur so that he/ she can eliminate other conditions unrelated to internal hernias.

When discovered, **external hernias** may be reducible by gently maneuvering the protruded tissue back into the body cavity under the instruction of a physician, without significant pain or discomfort (*reducible hernias*). It may disappear when you lie down. Coughing or straining may make the lump appear. However, they can be the cause of discomfort and pain, with symptoms often becoming worse when standing, straining, or lifting heavy items.

In cases of **external hernias**, such as inguinal (groin) and femoral (upper thigh) hernias, symptoms may be more grouped into a relatively focused area. Typical symptoms may include a physical bulge in the affected site that becomes more apparent to the eye when standing, or when pressure is exerted by the body. For example, coughing or straining during constipation may increase the size of the protrusion. Generally, when hernias cannot be reduced by pushing the protrusion back into the body (**irreducible hernias**), surgery may be required to repair the hernia. Discomfort at the hernia site, such as pelvic pain, as well as heaviness and abnormal swelling, are also common. There may also be sharp or dull pain during a bowel movement.

One should seek immediate medical attention if a hernia develops any of the following symptoms;

- Sudden, severe pain
- Fever
- Nausea

- Vomiting
- Difficulty passing stools (constipation) or wind
- Appearance of blood in stool.
- Inflammation: -The protrusion can also change in color, ranging from red, purple or dark pink. In this case, the attention of a medical doctor is imperative, so as to avoid gangrene, a life-threatening condition involving the death of the strangulated organs.
- The hernia becomes firm, red or tender, or cannot be pushed back into the abdomen

These symptoms could mean that the blood supply to a section of an organ or tissue trapped in the hernia has become cut off (**strangulation**), or that a piece of bowel has entered the hernia and become blocked (**obstruction**). A strangulated hernia and obstructed bowel are **medical emergencies**.

Tests and diagnosis of hernia

Physical Examination- the doctor will often be able to see and palpate/feel the bulge. While the doctor is feeling for the hernia, you may be asked to bend or move, or to cough, as this can enlarge the bulge.

Imaging Tests- These are used to confirm the diagnosis or assess the extent of the problem

- Ultrasound scan
- CT (computerized tomography) scan

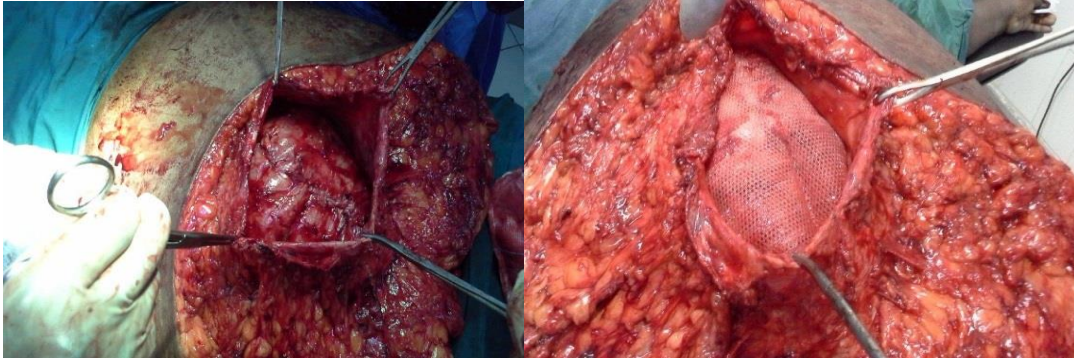
Treatment of Hernia

For **asymptomatic hernia**, the usual course of action is watchful waiting. Surgical options depend on individual circumstances, the type, content of the hernia, presenting symptoms and one's general health. There are two main types of surgical intervention for hernia:-

- **Open surgery**
One cut is made to allow the surgeon to push the lump back into the abdomen. Open surgical repair closes the hernia using sutures, mesh, or both, and the surgical wound in the skin is closed with sutures, staples, or surgical glue.



Before surgery.

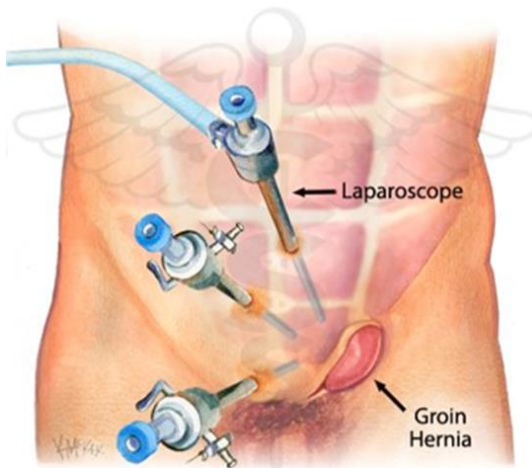


Retro- muscular mesh repair



After surgery.

➤ **Laparoscopic operation (keyhole surgery)**





Laparoscopic Hernia Repair.

The hernia is repaired in the same way as in open surgery but is guided by a small camera and a light introduced through a tube (laparoscope). Surgical instruments are introduced through a further small incision. The abdomen is inflated with carbon dioxide gas to improve visualization and space.

Advantages of Laparoscopic Hernia Repair

- Reduced risk of infection and bleeding
- Resumption to normal activity for most patients within a week
- A shorter return to work
- Reduced recurrence rate

Possible Complications

- Bleeding and risk of infection
- Low risk of injury to the urinary bladder, the intestines, blood vessels, nerves or the sperm tube going to the testicle.
- Difficulty urinating after surgery can occur
- Bruising and swelling of the scrotum, the base of the penis, and the testicles; this gradually resolves on its own in most patients.

➤ Recurrence