

# Inguinal Hernia

Hernias are a common occurrence among the general population and are defined as a weakness or defect in the abdominal wall. Having these weaknesses allows for protrusion or “herniation” of abdominal contents such as bladder, intestine, or fat into these areas.

## What causes hernias to occur?

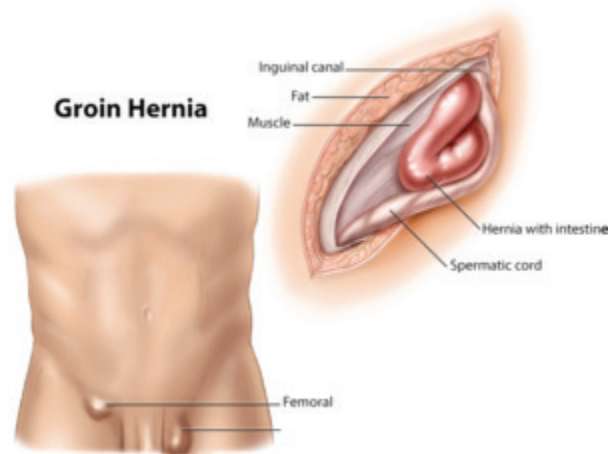
Hernias can occur wherever a defect or weakness in the abdominal wall occurs. Persistent or continued pressure within the abdominal cavity increases the risk for developing a hernia. Activities or characteristics that may contribute to an increase in the pressure against the abdominal wall include heavy lifting or straining (especially straining while having bowel movements), coughing, being overweight or obese, or pregnancy.

Men are more susceptible to inguinal hernias due to the process of fetal male development. During fetal development the contents of the testicle form within the abdominal cavity and then later descend into the scrotum along the inguinal canal. Shortly following birth, the inguinal canal should close almost completely to seal the abdominal cavity from the scrotum allowing only the spermatic cord and vessels into the scrotum. If this area does not close correctly, an area of weakness is present in which abdominal contents may pass through resulting in a hernia.

## How will I know if I have a hernia?

The signs of an inguinal hernia include a “lump” or “bulge” in the groin or abdomen. This area may be tender or painless. This area may start small and progressively grow in size over weeks, months, or even years. At times they may suddenly appear after heavy lifting or straining, bending, coughing, vomiting, etc. These areas may become swollen with more activity or heavy lifting causing some discomfort or tenderness. The type of pain is sometimes described as “burning,” “tugging,” or a “feeling of heaviness” in the area where the hernia is present. Men may notice scrotal swelling. The lump & tenderness may improve or go away when lying flat.

A patient may not be aware they have a hernia if it is painless and small. A physician may find on a routine physical exam. Otherwise, a physician is able to examine a patient for hernias by having a patient cough while touching the area of concern. In men, physicians may extend a finger up the scrotum into the groin area and be able to feel a bulge when a patient coughs/strains.



Source: American College of Surgeons

## What types of hernias occur in the groin?

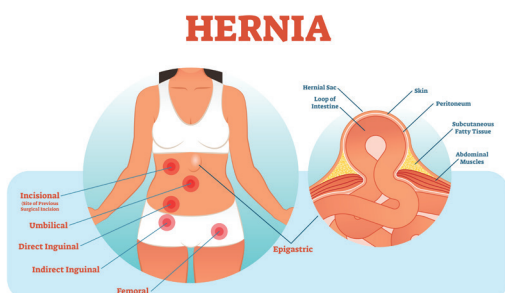
Indirect hernias form at the opening of the inguinal canal, the internal ring, allowing for possible intestine to enter into this space. These can form due to an inadequate closure of this canal after the testicles descend into the scrotum during male fetal development. In women an indirect hernia can occur if the inguinal ligament of the inguinal canal does not close properly during female fetal development.

A direct hernia forms at a weakness in the abdominal wall next to the opening of the inguinal canal. Similar to the indirect inguinal hernia, intestine has the possibility of entering into this weakness/defect.

A femoral hernia occurs in the groin or upper thigh. It forms in the femoral canal, below the inguinal ligament, at a site of naturally occurring weakness. These hernias are more common in women than men.

## What if I decide not to have my hernia repaired?

There is the possibility a hernia may grow in size and become tender over time. The other risk is if the hernia becomes large enough for abdominal contents to become “stuck” in this area of weakness. If these contents become “stuck,” otherwise known as an “incarcerated hernia” there is a risk of losing blood supply to these organs. If this should occur emergent surgery would be necessary. In general, incarcerated hernias are very tender to the touch and do not push back into the abdomen (non-reducible).



## Treatment:

The only option to fix a hernia is surgery. For certain types of hernias that are not causing pain or other symptoms, surgery may be delayed to when it is more convenient to undergo surgery. There are several different approaches to hernia repair including open repair, laparoscopic, and robotic-assisted repair. Most often a hernia is repaired using a mesh material for a more durable repair. The mesh is permanent and the type of mesh material is chosen by the surgeon based on the type of hernia being repaired. Over time the mesh incorporates itself into the body's tissue.

Open repair includes a larger incision over the area of the inguinal hernia and sterile mesh is placed over the defect. An open inguinal hernia repair can be performed under what is known as a MAC (monitored anesthesia care) anesthetic or a general anesthetic. MAC anesthesia means the certified anesthesiologist provides sedating medication given into a vein (I.V.) without requiring a breathing tube. The surgeon injects a local anesthetic at the surgical site. General anesthesia requires the use of a breathing tube into the lungs to aid in breathing during the surgery.

The laparoscopic inguinal hernia repair approach involves a laparoscope, a long tubular instrument with a camera on the end. The laparoscope is inserted through a small incision at the navel. Several small incisions are made in the abdomen to allow surgical instruments to be inserted to perform the surgery. The abdomen is filled with air (insufflated) to allow room for the surgeon to safely use the laparoscope and surgical instruments to visualize the area of the hernia. Mesh is secured into place. Laparoscopic hernia repairs are all performed under a general anesthetic. There is some evidence suggesting a decrease in post-operative pain with this approach.

In robotic-assisted surgery, the surgeon is seated in a console next to you and uses a 3D camera for a clearer, magnified view of the hernia. The operation occurs through small incisions using tiny instruments and a camera, controlled by the surgeon, allowing for a precise hernia repair. The potential benefits of robotic-assisted surgery include minimal pain, shorter hospital stay for larger hernia repairs, lower rate of hernia returning, and less chance of converting a surgery to open procedure.

## Will I need to stay in the hospital after surgery?

A general or an IV sedation type anesthesia is used depending on the type of hernia and how it is repaired. Patients are usually able to return home the same day of surgery for umbilical, femoral, and inguinal hernias. Some larger ventral or incisional hernias require an overnight stay. This also depends on any previous medical conditions you may have prior to surgery.

## What can I expect for recovery following surgery and will I have any restrictions?

Most patients will have some pain at the site of the incisions. You will be provided with a prescription pain medication upon discharge to aid in pain control. People usually require this for the first few days following surgery and then pain can be managed with over the counter pain medications. The major restriction following hernia surgery is a period of not lifting, pushing, or pulling anything greater than 10-15 pounds for two to six weeks, depending on the hernia size & how it is repaired. This is to allow time for healing and to prevent recurrence of the hernia in the future.



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