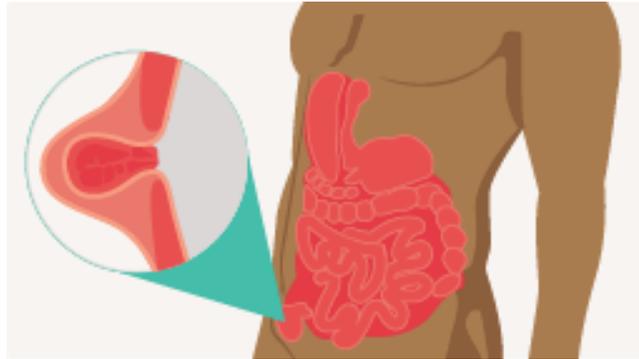


A Comprehensive Guide to Hernias



Hernias are a very common medical condition with over one million cases each year. Although hernias are very common, they are more prevalent in men than women. Approximately 1 in 4 men (25%) and 1 in 50 women (2%) will require surgery for hernia repair during their lifetime¹. While hernias can be painless, it is important to know the signs and symptoms of a hernia to help prevent further complications.

What is a Hernia?

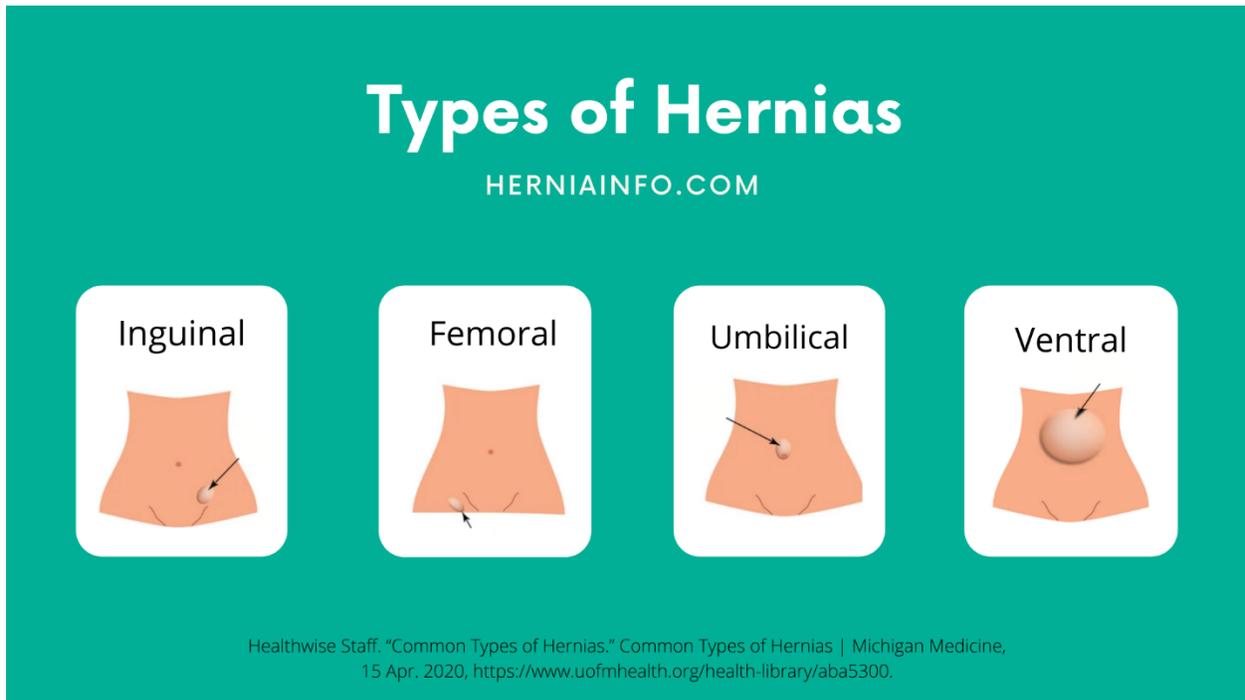
A hernia occurs when an organ or fatty tissue bulges through a weak spot in the muscle wall or fascia (the thin lining of connective tissue surrounding most parts of the body) containing it².

There are three main types of hernias: inguinal (in the groin), femoral (in the thigh), and ventral, which consists of umbilical (near the belly button), incisional (near the site of a scar from surgery), and epigastric (near the sternum) hernias.

¹ Beadles CA, Meagher AD, Charles AG. Trends in Emergent Hernia Repair in the United States. *JAMA Surg.* 2015;150(3):194–200. doi:10.1001/jamasurg.2014.1242

² “Hernia: Types, Treatments, Symptoms, Causes & Prevention.” *Cleveland Clinic*, <https://my.clevelandclinic.org/health/diseases/15757-hernia>.

Types of Hernias¹¹



INGUINAL HERNIA

Inguinal hernias are characterized by the appearance of a bulge in or near the groin. The biggest risk factors for an inguinal hernia are aging and increased pressure within the abdominal cavity due to chronic coughing, strain, or lifting, among other things. Both aging and repeated strain on the abdominal muscle can weaken the muscle and put the body at risk for a hernia.²

FEMORAL HERNIA

A femoral hernia is characterized by a protrusion in the lower abdomen that causes a bulge in the upper thigh. Similar to inguinal hernias, femoral hernias are often felt in the groin. Risk factors for a femoral hernia include aging, increased pressure in the abdominal cavity, and pregnancy (childbirth). Due to the strain pregnancy causes on the body, women are more likely to develop femoral hernias than men.³

³ "Femoral Hernia: Causes, Symptoms, Emergency Symptoms, Diagnosis, Treatment, Outlook." *Healthline*, <https://www.healthline.com/health/femoral-hernia>

Ventral Hernias

A ventral hernia is characterized by a protrusion that occurs anywhere on the midline of the abdominal wall. Risk factors include strain on the abdominal wall from things such as pregnancy, lifting, extreme vomiting, or a previous abdominal surgery.⁴

Symptoms^{5,6}

Although hernias can be asymptomatic, symptoms commonly seen in people with hernias include:

- Appearance of a bulge while coughing, lifting items, going to the bathroom, or performing other strenuous activities
- Discomfort or pain at the site of bulge
- Heartburn
- Constipation

People who have strangulated or incarcerated hernias, which occur when tissue bulging through the abdomen cannot be pushed back in, may experience the following symptoms⁵:

- A sudden onset of pain that intensifies quickly
- Nausea
- Involuntary vomiting
- Bloody stools
- Tenderness at the site of the bulge/hernia
- Fever
- Fatigue

Strangulated or incarcerated hernias can be a medical emergency and typically require immediate medical attention. If you are experiencing any of the above symptoms, contact your doctor immediately.

⁴ "Ventral Hernia: Treatments, Symptoms, Causes & Prevention." *Cleveland Clinic*, <https://my.clevelandclinic.org/health/diseases/16531-ventral-hernia>

⁵ Biggers, Alana MD <https://www.healthline.com/health/strangulated-hernia#symptoms>

⁶ Whitt, Jeremy <https://www.forrestcitymedicalcenter.com/forrest-city-medical-center/press1/five-symptoms-that-point-to-a-hernia--9867>

Risk Factors ^{5,7}

The most common risk factors for a hernia include:

- Gender (male)
- Smoking
- Obesity
- Excessive strenuous activity
- Chronic cough
- Pregnancy and childbirth

Diagnosis

A hernia is often diagnosed by clinical examination. Hernias typically appear as small lumps and look more pronounced when you cough or do strenuous exercise, such as lifting something heavy. To diagnose a hernia, your doctor will feel for a lump and may ask you to stand from a seated position. He or she may also ask you to cough to make the hernia bulge more prominent.

Your doctor may ask you to undergo an ultrasound or a CT scan to enable a more informed diagnosis.

Treatment Options

Hernia Mesh Treatment

Most hernia repair surgeries are performed using a mesh. Hernia mesh is used to reinforce the weak spot in the abdominal wall where a hernia was located. Placing mesh over the hernia location creates a barrier that helps to prevent tissue from pushing through it. Most mesh is attached to the body using stitches, staples / tacks, or glue.

⁷ Medscape, <https://www.medscape.com/answers/189563-45214/what-are-the-sex-related-demographics-for-abdominal-inguinal-hernias>

Types of Hernia Mesh ⁸

- **Synthetic Mesh:** Synthetic Mesh is a permanent implant often made from synthetic plastic (e.g., polypropylene, polyester, or ePTFE). Synthetic meshes remain in the body to help provide long term reinforcement to the repair.
- **Bioresorbable Mesh:** Bioresorbable mesh is an implant made of natural biomaterials. These meshes are designed to be absorbed by the body to help protect the repair.
- **Biologic Grafts:** A biologic graft is an implant derived from animal or human tissue. Biologic grafts dissolve completely over time to help support the repair as the body heals.

Non-Surgical Treatment

If your hernia is asymptomatic, your surgeon may recommend watchful waiting. During this period, you may be advised to closely observe the area for possible symptoms that could indicate a medical emergency. It is likely that your doctor may also observe and measure your hernia to ensure it doesn't grow or become painful.

Ultimately, this decision should be made together with your doctor based on your specific situation.

Types of Surgical Treatment⁹

A hernia will not heal on its own, and surgery is required to repair a hernia. There are three primary surgical options for hernia repair: open, laparoscopic, and robotic. The appropriate type of surgery for you may depend on the size, severity, and location of your hernia.

Ask your doctor about which option is right for you.

Open

An open surgical procedure involves making an incision over the area of the hernia. The hernia bulge is returned to its correct position and a mesh is often placed to help strengthen and support the weakened area.

⁸ FitzGerald JF, Kumar AS. Biologic versus Synthetic Mesh Reinforcement: What are the Pros and Cons?. *Clin Colon Rectal Surg.* 2014;27(4):140-148. doi:10.1055/s-0034-1394155
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4477030/>

⁹ "Surgery for Hernia Repair: Treatment, Types, Recovery." *Cleveland Clinic*,
<https://my.clevelandclinic.org/health/treatments/17967-hernia-repair-surgery>

Laparoscopic

A surgeon may use several smaller, key-hole sized incisions during laparoscopic surgery. After these incisions are made, instruments are inserted through them to perform the operation.

Robotic

Similar to laparoscopic surgery, robotic surgery uses several smaller incisions. Your surgeon performs your operation from a console located in the operating room.

Post-Operative Recovery

Each patient will have a different post-operative recovery and activity level. Ask your doctor what you may experience during your recovery. In general, after surgery, patients typically experience pain or discomfort. Some may feel tired and have less energy than usual.

Recovery varies from person to person, but strenuous activity should be avoided for 4 - 6 weeks¹⁰.

Be sure to follow the wound care instructions exactly as prescribed by your doctor.

Should you have any questions or concerns regarding your recovery, do not hesitate to contact your doctor.

¹⁰ Intercoastal Medicine, <https://www.intercoastalmedical.com/2020/11/18/hernia-facts-pain-types-surgery-and-recovery-time/>

¹¹ <https://www.uofmhealth.org/conditions-treatments/surgery/hernia-surgery>