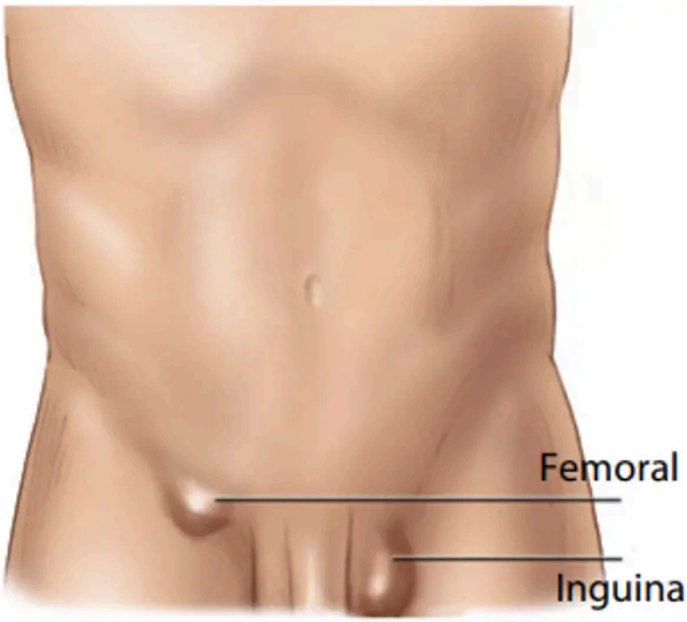
Adult Inguinal and Femoral Groin Hernia Repair

A hernia occurs when tissue bulges out through an opening in the muscles. Any part of the abdominal wall can weaken and develop a hernia, but the most common sites are the groin (inguinal), the navel (umbilical) and a previous surgical incision site. An inguinal hernia in the groin is more common in men. A femoral hernia may be at the upper leg, vaginal area or groin, and is more common in women.



Common Symptoms

- Bulge in the groin, scrotum, or abdominal area that often increases in size with coughing or straining.
- Mild pain or pressure at the hernia site.[1]
- Numbness or irritation due to pressure on the nerves around the hernia.[2]
- Sharp abdominal pain and vomiting can mean that the intestine has slipped through the hernia sac and is strangulated. This is a surgical emergency and immediate treatment is needed.

Surgical Procedure

Open Hernia Repair

An incision is made near the site and the hernia is repaired with mesh or by suturing (sewing) the muscle closed.

Laparoscopic Hernia Repair

The hernia is repaired by mesh or sutures inserted through instruments placed into small incisions in the abdomen.

Nonsurgical Procedure

About 1/3 of groin hernia patients have no symptoms. Watchful waiting may be a safe option for adults who are not uncomfortable. Most men with an inguinal hernia need surgery due to increased pain with exercise, chronic constipation or urinary symptoms. 23% crossed over to surgery after 2 years and 50% after 5 years.[2]

Benefits and Risks of Your Operation

Benefits

An operation is the only way to repair a hernia. You can return to your normal activities and in most cases will not have further discomfort. Possible risks include—Return of the hernia; infection; injury to the bladder, blood vessels, intestines or nerves, difficulty passing urine, continued pain, and swelling of the testes or groin area.

Risks of Not Having an Operation

Your hernia may cause pain and increase in size. If your intestine becomes trapped in the hernia pouch you will have sudden pain, vomiting, and need an immediate operation.

Expectations

Before your operation—A physical examination is usually all that is needed to diagnose groin hernias.[2] Evaluation may include blood work and urinalysis. Your surgeon and anesthesia provider will discuss your health history, home medications, and pain control options.

The day of your operation—You will not eat or drink for 4 hours before the operation. Most often you will take your normal medication with a sip of water. You will need someone to drive you home.

Your recovery—If you do not have complications you usually will go home the same day. You may return
to work after 1 to 2 weeks after laparoscopic or open repair, as long as you don't do any heavy lifting.

Call your surgeon if you have:

- Pain that will not go away
- Pain that gets worse
- A fever of more than 101°F or 38.3°C
- Continuous vomiting
- Swelling, redness, bleeding, or bad-smelling drainage from your wound site
- Strong or continuous abdominal pain or swelling of your abdomen
- No bowel movement by 2 to 3 days after the operation

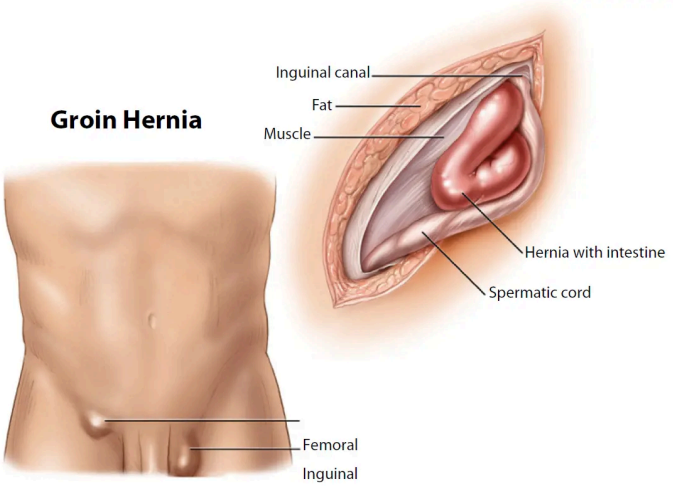
Keeping You Informed

Who Gets Hernias?

There may be no cause for a hernia. The risk of developing an inguinal hernia is 3% for women and 27% for men.[3] Inguinal hernias are 8-10 times more common in men.[2] Some risk factors are:

- Older age—muscles become weaker
- Obesity—increased weight places pressure on abdominal muscle
- Sudden twist, pulls, or strains
- Chronic straining
- Family history
- Connective tissue disorders
- Pregnancy—1 in 2,000 women develop a hernia during pregnancy.[4]

Other medical disorders that have symptoms similar to hernias include enlarged lymph nodes, cysts, and testicular problems such as scrotal hydrocele.



The Condition

The Procedure

Common Tests

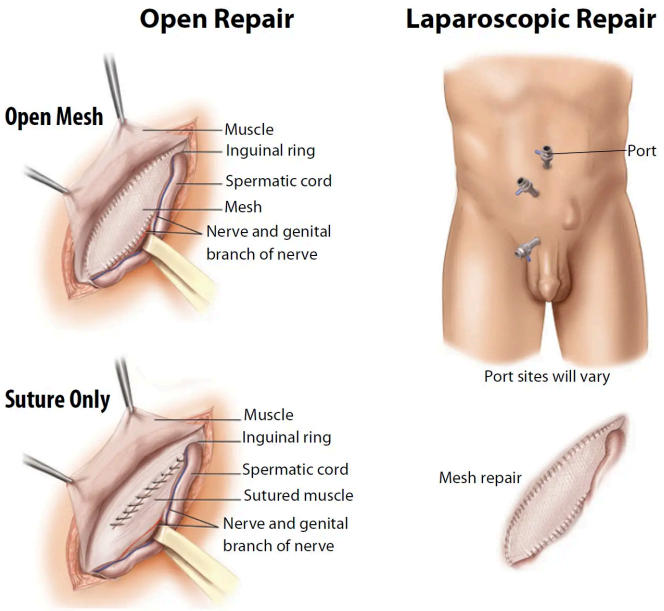
Keeping You Informed

Open vs. Laparoscopic Incisional Repair

A laparoscopic repair of inguinal hernia may result in less pain and numbness, lower infection rate, and faster return to normal activity than open repair. When surgeons have

experience with laparascopic repair, operation times, and complication rates compare to open suture repair. In follow-up after 48 months there was no difference in severe chronic pain and long-term recurrence between the types of repair.[11]

Repairing both sides of the hernia at the same time (bilateral repair) when done by an experienced laparoscopic surgeon has faster recovery, lower reports of chronic pain and is cost effective.[12]



Risks Based on the ACS Risk Calculator

Open and Laparoscopic Inguinal and Femoral Hernia Surgery from the ACS Risk Calculator—July 19, 2022

Risks	Percent for Average Patient	Keeping You Informed
Wound Infection: Infection at the area of the incision or near the organ where the surgery was performed	**Open** 0.4% **Laparoscopic** 0.3%	Antibiotics and drainage of the wound may be needed. Smoking can increase the risk of infection.
Complications: Including surgical infections, breathing difficulties, blood clots, renal (kidney) complications, cardiac complications, and return to the operating room	**Open** 1.6% **Laparoscopic** 1.5%	Complications related to general anesthesia and surgery may be higher in smokers, elderly and/or obese patients, and those with high blood pressure and breathing problems. Wound healing may also be decreased in smokers and those with diabetes and immune system disorders.

Pneumonia: Infection in the lungs	**Open** 0.1% **Laparoscopic** 0.1%	Movement, deep breathing, and stopping smoking can help prevent respiratory infections.
Urinary tract infection: Infection of the bladder or kidneys	**Open** 0.2% **Laparoscopic** 0.2%	Drinking fluids and catheter care decrease the risk of bladder infection.
Venous thrombosis: A blood clot in the legs that can travel to the lungs	**Open** 0.1% **Laparoscopic** 0.1%	Longer surgery and bed rest increase the risk. Getting up, walking 5 to 6 times per day, and wearing support stockings reduce the risk.
Death	Less than 1%	Your surgical team is prepared for all emergency situations.

Risks from Outcomes Reported in the Last 10 years of Literature	Percent for Average Patient	Keeping You Informed

Chronic (long-term) pain	10% to 12% may have pain one year after surgery; possibly less with lapraoscopic [13]	Factors contributing to chronic pain include emergency hernia repair, scrotal hernia, recurrent hernia repair, young age, female gender, perioperative pain, open hernia repair, perioperative complications, and penetrating mesh fixation.[1] Pain caused by compression or tension may gradually decrease with time as a result of tissue rearrangement.[14]
Recurrence: A hernia can recur after the repair	**All patients** 1% to 17% [15] **Open** 4.9% **Laparoscopic** 10.1%	Recurrence occurs less often when mesh is used versus non-mesh repair.[16] Laparoscopic repair is recommended for recurrent hernias because the surgeon avoids previous scar tissue. There is a higher rate of recurrence in older men with laparoscopic repair.

Neuralgia: Nerve pain causing tingling or numbness	**Open** 10.7% **Laparoscopic** 7.4%	Pressure, staples, stitches, or a trapped nerve in the surgical area can cause nerve pain. Tell your doctor if you feel severe, sharp, or tingling pain in the groin and leg immediately after your procedure; an operation may be required if the nerve is trapped.[16]
Seroma: A collection of clear/yellow fluid	5-25% [17]	Seromas can form around the former hernia site. Removal of fluid with a sterile needle may be required.
Hematoma: a collection of blood in the wound site or scrotum	3.4% [18]	Hematomas are treated with anti-inflammatory medications, elevation, and rest. Rarely blood replacement or further testing for a blood vessel injury is needed.

The ACS Surgical Risk Calculator estimates the risk of an unfavorable outcome. Data is from a large number of patients who had a surgical procedure similar to

this one. If you are healthy with no health problems, your risks may be below average. If you smoke, are obese, or have other health conditions, then your risk may be higher. This information is not intended to replace the advice of a doctor or health care provider. To check your risks, go to the ACS Risk Calculator at http://riskcalculator.facs.org.

Recovering from Surgery

Access resources and information you need to optimize your recovery from surgery.

Surgery FAQ

Answers to common questions surgical patients have before, during, and after a procedure.

Overviews of Common Procedures

Easy-to-understand information about common surgical procedures.

Glossary

Advance directives: Documents signed by a competent person giving direction to health care providers about treatment choices.

Computerized tomography (CT) scan: A diagnostic test X ray and a computer to create a detailed, three-dimensional picture of your abdomen. A CT scan is commonly used to detect abnormalities or disease inside the abdomen. It is sometimes used to find a hernia not obvious during the physical exam.

Digital exam: The examiner will place their gloved index finger gently into the scrotal sac and feel up to the inguinal ring in the groin. Then the patient is asked to strain.

Electrocardiogram (ECG): Measures the rate and regularity of heartbeats and any damage to the heart.

General anesthesia: A treatment with certain medicines that puts you into a deep sleep so you do not feel pain during surgery.

Hematoma: A collection of blood that has leaked into the tissues of the skin or in an organ, resulting from cutting in surgery or the blood's inability to form a clot.

Incarceration: The protrusion or constriction of an organ through the wall of the cavity that normally contains it.

Local anesthesia: The loss of sensation only in the area of the body where an anesthetic drug is applied or injected.

Nasogastric tube: A soft plastic tube inserted in the nose and down to the stomach which is used to empty the stomach of contents and gases to rest the bowel.

Seroma: A collection of serous (clear/yellow) fluid.

Strangulation: Part of the intestine or fat is squeezed in the hernia sac and blood supply to the tissue is cut off.

Ultrasound: Sound waves are used to determine the location of deep structures in the body. A hand roller is placed on top of clear gel and rolled across the abdomen. An ultrasound may be used to find a hernia that is not obvious during the physical exam.

Urinalysis: A visual and chemical examination of the urine, most often used to screen for urinary tract infections and kidney disease.

DISCLAIMER

The American College of Surgeons (ACS) is a scientific and educational association of surgeons that was founded in 1913 to improve the quality of care for the surgical patient by setting high standards for surgical education and practice. The ACS endeavors to provide procedure education for prospective patients and those who educate them. It is not intended to take the place of a discussion with a qualified surgeon who is familiar with your situation. The ACS makes every effort to provide information that is accurate and timely, but makes no guarantee in this regard.

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The information provided in this report is chosen from recent articles based on relevant clinical research or trends. The research below does not represent all that is available for your surgery. Ask your doctor if he or she recommends that you read any additional research.

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