

Medtronic

Hernia surgery guide



About the condition

How common is a hernia?

Approximately 1.3 million total hernia procedures are performed annually in the United States.¹ Inguinal hernia procedures make up approximately 60% of total hernia procedures,¹ and they are most common in men due to the male anatomy of the spermatic cord (the opening that descends to the testis).³ Femoral hernias are 10 times more common in women,³ and they must always be repaired because of a high risk of strangulation.²⁻⁴

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What is a hernia?

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An inguinal or femoral hernia is a weakness or defect in the abdominal wall in the groin area. Internal organs may push through this weakness or defect, causing discomfort, pain, and a noticeable bulge.

The anatomy of a hernia can be compared to a bulge in the inner tube of a tire. When the tire is damaged, the inner tube pushes and bulges through the opening of the tire (Figure 1). Similarly, when a hernia occurs, the inner layer of the abdominal wall may push against and through the abdominal wall defect (Figure 2).

In some cases, a hernia may cause only slight discomfort. In other cases, a hernia may block digestion and may cause severe pain, requiring immediate medical attention.



Figure 1

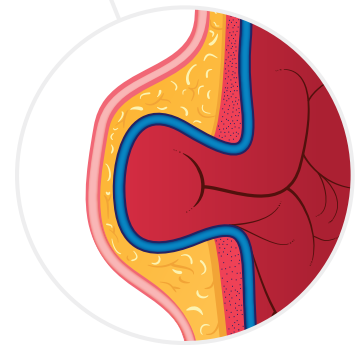
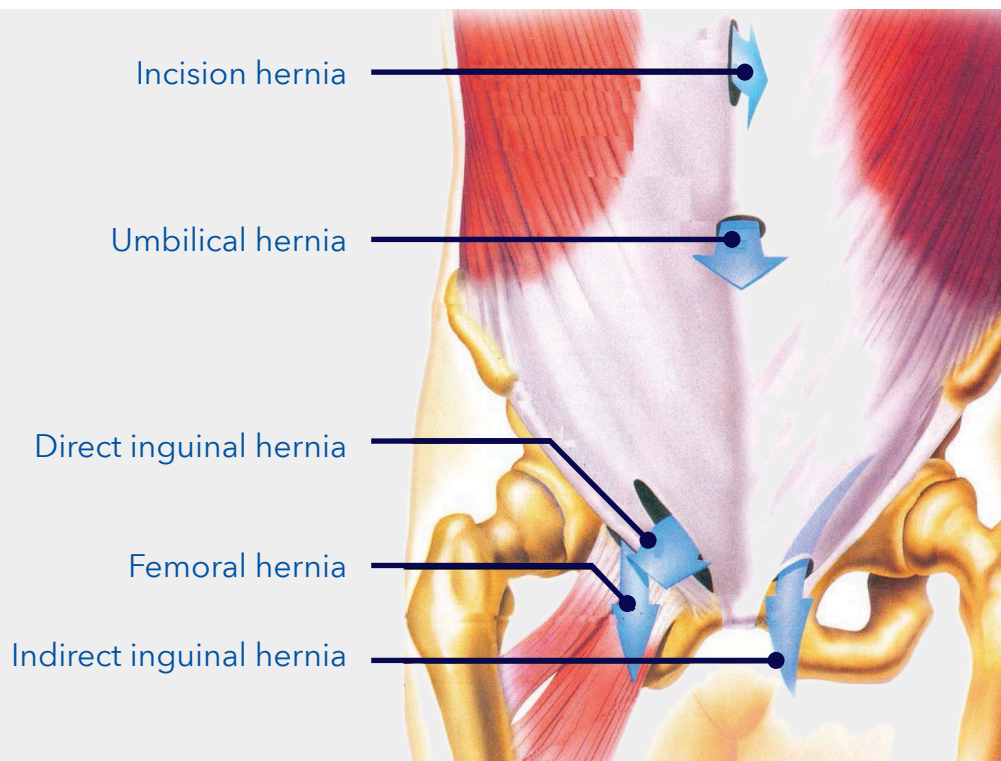


Figure 2

How does a hernia occur?

Some hernias may be acquired hernias, while others are caused by a congenital weakness (i.e., a weakness that a person is born with). Acquired hernias may be caused by lifting heavy objects, pregnancy, extreme weight gain, or persistent coughing.



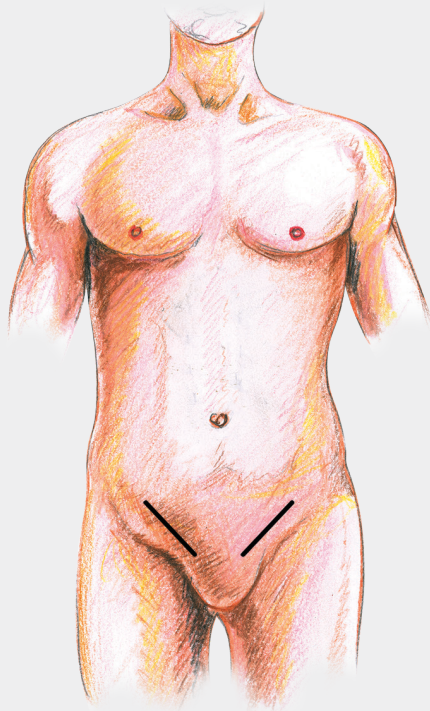


Figure 3.
Traditional open
repair incisions

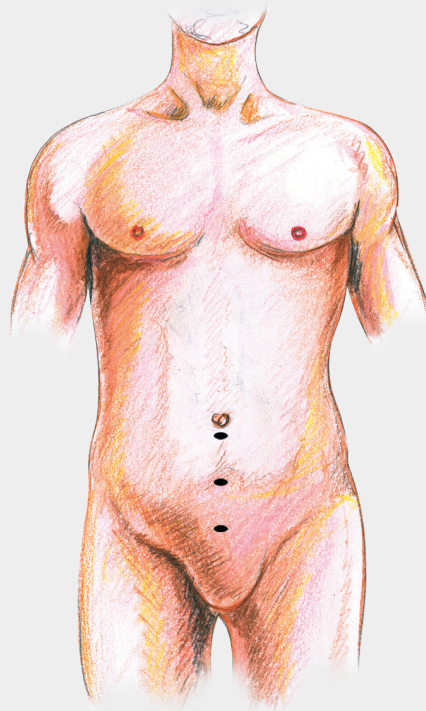


Figure 4.
Laparoscopic hernia
repair incisions

Treatment options

Initially, your doctor may want to simply monitor your hernia for possible complications. This approach is called “watchful waiting.”⁴ In many cases, patients will have to undergo surgical repair because a hernia will not heal itself.

Surgical treatment options

Traditional open hernia repair

An incision is made through the abdominal wall near the site of the hernia defect. The hernia is then repaired with mesh or by suturing the defect. The incision can range from 5 cm to 10 cm in length depending on the size and location of the hernia and also the surgeon’s technique.

Laparoscopic hernia repair

This procedure is referred to as minimally invasive surgery. The hernia is repaired with mesh that is inserted through ports placed into small incisions in the abdomen, therefore eliminating the need for a large incision (Figure 4).

Laparoscopic vs. traditional open hernia repair

	Laparoscopic repair	Traditional open repair
Return to normal activity⁵	Shorter time	Longer time
Complication rate⁵	Low	Low
Postoperative pain⁵	Less	More
Surgical site infection⁵	Extremely low	Low
Recurrence of hernia⁵	Low	Low

Consult your surgeon for all risks associated with minimally invasive, laparoscopic, and traditional open hernia or general surgeries.

About the procedure

How the procedure is performed

In a traditional open hernia repair, the surgeon makes an incision near the hernia site and the hernia is reduced or pushed back into the abdomen. Most inguinal hernia repairs use mesh to close the muscle.⁷

In a laparoscopic hernia repair, a laparoscope (a small camera that allows the doctor to visualize as they operate) is inserted through a small incision. The most common technique involves three small incisions that are made between the navel and the groin. These incisions can range from 0.6 cm to 1.3 cm, reducing postoperative discomfort and scarring, promoting faster healing, and allowing for a much quicker return to normal activities.⁵

What happens during surgery?

First, the patient is given general anesthesia to ensure they will not feel pain during the surgery. During an open mesh repair, the hernia sac is removed. Mesh is positioned over the hernia site and attached using sutures sewn into the stronger tissue surrounding the hernia site.⁶

During laparoscopic hernia repair, three small incisions are made; one incision will be near the navel and the other two will be made in the lower abdomen. The laparoscope and other surgical instruments will be inserted through these incisions. The surgeon will use a special balloon to create a space between the layers of the abdominal wall near the hernia.

The surgeon will locate the hernia with the laparoscope while viewing it on a TV monitor. The hernia is reduced (pulled back) and then repaired by placing a piece of mesh directly over the hernia defect, like a patch covering a bulging tire. Once the procedure is complete, the small incisions are closed with sutures or surgical tape.

In both an open and a laparoscopic mesh repair, the mesh is a permanently implanted material screen placed over the defect.⁶

What might patients expect after surgery?

Following hernia repair, patients are taken to the recovery room and monitored by a nurse until they are awake and alert. A surgeon will evaluate progress and may prescribe medication to relieve discomfort from the surgery. A nurse will go over any discharge instructions with patients before they leave the hospital. These instructions will include what to expect during the first few days, how to care for the incision(s), and a list of symptoms and warning signs. The nurse will also provide a number to call if patients have any concerns or questions.



Compared to traditional open repair surgery, in a laparoscopic procedure, patients may experience:

- Less pain⁵
- Low recurrence rates⁵
- Few complications and a fast return to normal activity⁵

Questions to ask your doctor

1. What technique will be used to repair the hernia?
2. How frequently does the surgeon perform this procedure in their practice?
3. What risks are associated with this type of surgery?
4. What are the risks and side effects of anesthesia?
5. What is the recurrence rate with the recommended procedure?
6. What products or medical devices will likely be used in the procedure?
7. What level of pain is expected, and how will it be managed?
8. Do I need to stay in the hospital? If so, for how long?
9. Will there be any costs associated with the surgery?
10. Approximately how long will it be before I can return to my normal activities?
11. When, and how often, will I need to see a doctor for follow-up visits?





This material is intended to be educational and is not a diagnostic tool. It is not intended to replace the information provided to you by your healthcare provider and does not constitute medical advice. The information may not be directly applicable to your individual clinical circumstances.

Talk to your doctor about the risks and benefits of hernia surgery.



Questions?

Contact your health care provider.

The possible complications associated with the use of surgically implantable mesh are: seroma, hematoma, recurrence, adhesions, bowel obstruction, fistula formation, infection, inflammation, acute and chronic pain, extrusion/erosion and/or allergic reaction to the components of the product.

Other possible complications inherent to the surgical procedure may occur, including but not limited to trocar site herniation and organ injury.

1. Medtronic U.S. market model. September 2022. **2.** Fitzgibbons RJ Jr, Giobbie-Hurder A, Gibbs JO, et al. Watchful waiting vs repair of inguinal hernia in minimally symptomatic men: a randomized clinical trial. *JAMA*. 2006;295(3):285-292. doi:10.1001/jama.295.3.285. **3.** Malangoni MA, Rosen MJ. Hernias. In: Townsend CM, Beauchamp RD, Evers BM, Mattox KL, eds. *Sabiston Textbook of Surgery*. 19th ed. Philadelphia, PA: Elsevier; 2012:1114-1140. **4.** Sarosi GA, Wei Y, Gibbs JO, et al. A clinician's guide to patient selection for watchful waiting management of inguinal hernia. *Ann Surg*. 2011;253(3):605-610. doi: 10.1097/SLA.0b013e31820b04e9. PMID: 21239979. **5.** Abbas AE, Abd Ellatif ME, Noaman N, et al. Patient-perspective quality of life after laparoscopic and open hernia repair: a controlled randomized trial. *Surg Endosc*. 2012;26(9):2465-2470. **6.** American College of Surgeons. Surgical Patient Education: Groin Hernia Repair Inguinal and Femoral, 2019 Groin Hernia Brochure Version 1, www.facs.org/-/media/files/education/patient-ed/groin_hernia.ashx. **7.** Gould J. Laparoscopic versus open inguinal hernia repair. *Surg Clin North Am*. 2008;88(5):1073-1081, vii-viii. doi: 10.1016/j.suc.2008.05.008. PMID: 18790155.

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555 Long Wharf Drive New Haven, CT 06511 508.261.8000 800.722.8772

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