

Open Inguinal Hernia Repair

You have a hernia in the groin (inguinal) area. A hernia occurs when tissue from inside the abdomen pushes through a weakness in the muscle or fascia, creating a visible bulge that may cause discomfort, pain, or activity limitation.

I am offering to repair your hernia with an open approach. The information that follows is intended to supplement what we discussed in clinic. My intention is to help you explain the procedure to family and friends who have questions.

What Is an Inguinal Hernia?

An inguinal hernia occurs when tissue, such as part of the intestine, pushes through a weak spot in the lower abdominal wall (groin). This can cause a bulge, discomfort, or pain, especially when lifting, coughing, or straining. Lower abdominal wall pain does not always signify the presence of a hernia.

Understanding Inguinal Anatomy, Embryology, and Physiology

- **Anatomy:** The inguinal region is located in the lower part of the abdomen, near the groin. Key structures include the inguinal canal (a passage in the lower abdominal wall), blood vessels, nerves, and muscles.
- **Embryology:** During development, the inguinal canal forms as structures like the testicles (in males) descend from the abdomen into the scrotum. This process leaves a natural weakness in the abdominal wall.
- **Physiology:** The abdominal wall muscles and connective tissue normally keep internal organs and intra-abdominal fat in place. Weaknesses or defects in these tissues can allow hernias to form.

Types of Inguinal and Related Hernias

- **Indirect Inguinal Hernia:** The most common type, often present from birth. It occurs when abdominal contents push through the internal inguinal ring, following the path taken during testicular descent.
- **Direct Inguinal Hernia:** Develops later in life due to weakness in the abdominal wall muscles, allowing tissue to push directly through the wall in the inguinal region.
- **Femoral Hernia:** Less common, occurs just below the inguinal ligament, where the femoral artery and vein pass into the thigh. More likely to occur in women.

What Is Open Repair?

Open inguinal hernia repair is performed through a single incision in the groin, made directly over the hernia. Depending on your health and preference, it can be done under local anesthesia with sedation, a spinal block, or general anesthesia. This approach gives the surgeon direct, hands-on access to the hernia and surrounding anatomy.

The Procedure

1. **Creating Access:** A single incision, typically 2 to 3 inches long, is made in the groin crease directly over the hernia.
2. The layers of tissue are opened to expose the inguinal canal and the hernia sac.

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3. **Identifying and Protecting the Nerves:** Three nerves run through this region — the ilioinguinal, iliohypogastric, and genital branch of the genitofemoral nerve. These are identified early and protected throughout the case to lower the risk of numbness or chronic pain afterward.
4. **Reducing the Hernia:** Protruding tissue (the hernia sac) is gently separated from surrounding structures and either returned to the abdomen or tied off and removed, depending on its size and location.
5. **Placing the Mesh:** After the hernia contents are reduced, a flat synthetic mesh is placed over the weakened area of the abdominal wall and secured in place. This reinforces the repair without tension and helps prevent recurrence.
6. **Closing Incisions:** The instruments are removed, and the layers of tissue are closed over the mesh. The skin incision is closed with absorbable sutures placed deep to the skin and covered with Dermabond, a watertight “super glue” for the skin.
7. **Nerve Block:** A local anesthetic may be injected near nerves in the groin to help control pain after surgery. This goes a long way toward minimizing the need for post-operative narcotics.

Potential Complications

- **Bleeding or infection:** Bleeding is minimized by utilizing electricity to cauterize small bleeding blood vessels. Infection is minimized by cleaning your skin with anti-septic soaps, utilizing sterile instruments, and administering antibiotics before the procedure starts.
- **Nerve injury or chronic pain:** Three nerves run through the inguinal region — the ilioinguinal, iliohypogastric, and genital branch of the genitofemoral nerve. Injury to any of these can cause numbness or chronic pain. Careful identification and protection of these nerves lowers this risk.
- **Injury to nearby structures:** The spermatic cord (in men) or round ligament (in women), or nearby blood vessels, are close to the repair site. Injury to these structures is uncommon but possible given the anatomy of this region.
- **Recurrence of the hernia:** Making sure the mesh lies completely flat, with no folds or gaps, lowers the chance the hernia comes back.
- Numbness around the incision is common and usually improves over time.

Multi-Modal Pain Management

After surgery, pain is managed using several types of medications:

- **NSAIDs (e.g., ibuprofen or celecoxib):** Reduce inflammation and pain.
- **Acetaminophen (Tylenol):** Helps control pain and fever.
- **Robaxin (methocarbamol):** A muscle relaxant to reduce muscle spasms.
- **Narcotics (as needed):** For breakthrough pain, used for the shortest time necessary.

This approach helps minimize the need for narcotics and improves comfort.

What to Expect After Surgery

- **Recovery:** Most patients go home the same day. You may have mild pain, swelling, or bruising.
- **Activity:** Walk as tolerated but avoid strenuous activity.
- **Lifting Restrictions:** Do not lift more than 10 pounds until your first post-op appointment.

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- **Wound Care:** You may shower the day of surgery. However, do not submerge your incision in water (such as in a bathtub, pool, or lake) for 2 weeks. Absorbable sutures are placed deep to the skin and covered with Dermabond, a watertight “super glue” for the skin.
- **Follow-Up:** Attend your scheduled post-op appointment to check healing and discuss returning to normal activities.
- **Keep Incisions Covered:** As incisions heal, they are sensitive to sun. If they become sunburned, they can discolor. This discoloration may become permanent.

When to Call the Office

Contact us if you experience:

- Fever over 101°F
- Severe pain not controlled by medication
- Redness, swelling, or drainage from incisions
- Constipation issues
- Any other questions or concerns — call (817) 250-7030

This handout is intended for patient education. Surgical technique, pain management, mesh selection, and recovery are individualized based on anatomy and clinical findings.