



## **Hernia Repair**

A hernia is a protrusion of a loop of bowel or a tissue through an opening in the wall of the abdominal cavity in which the bowel lies. Hernias are one of the most common conditions requiring surgery. Hernias can occur in men and women of all ages, and children. Hernias can develop around the navel, in the groin, or any place where you may have had a surgical incision. Some hernias are present at birth, while others develop slowly over a period of months or years, or they may come on suddenly.

### **Pathology:**

- Hernias commonly develop in an area of weakness. These areas include natural spaces and thin tissue, such as the internal inguinal ring and the floor of the inguinal canal. Hernias may develop at these sites or other areas due to aging, injury, an old incision, or a weakness present at birth.
- Another important factor in the development of hernias is an increase in the intra-abdominal pressure. This could be secondary to chronic constipation and prolonged straining, chronic persistent coughing, or lifting heavy objects.
- Types of hernia:
  - Inguinal hernias are in the groin area. They are most common in men, primarily because of the unsupported space left in the groin after the testicles descend into the scrotum. Inguinal hernias can be indirect, where the hernia sac exits through the internal inguinal ring and takes an oblique path; or direct, where the hernia sac exits through the external inguinal ring directly.
  - Femoral hernia occurs at the top of the thigh in the space through which the femoral artery, vein and nerve pass into the thigh. These hernias occur most often in women and commonly result from pregnancy and childbirth.
  - Umbilical hernias occur in the umbilicus (belly button) and occur most often in infants.
  - Incisional hernias occur at the site of previous abdominal surgery.

### **Indications for Surgery:**

- There are two reasons for hernia repair:
  - Correction or prevention of a dangerous strangulated hernia.
  - Elimination of pain that may be interfering with normal activity.
- In general, all hernias should be repaired unless there are other conditions in the patient that preclude a safe outcome.
- Trusses and surgical belts are helpful in the management of small hernias when surgery is contraindicated.

## **Surgical Repair:**

- A hernia repair is usually done on an outpatient basis. Typically, the procedure takes less than an hour to complete. Most patients are fully ambulatory and able to go home after about 2-4 hours.
- Inguinal hernia
  - An inguinal hernia is repaired by first making an incision just above the crease where the abdomen meets the thigh.
  - The inguinal canal is opened; the hernia sac is separated from the spermatic cord, lifted and opened. Intestine or other tissue is then placed back into the abdominal cavity. The excess sac is tied off and removed. The opening at the internal ring may be tightened and the abdominal wall reinforced using sutures to bring together the neighboring tissues without tension.
  - A synthetic mesh and/or plug may be used to repair the hernia. The tapered shape of the plug eases insertion into the defect and fills the 'hole' much like a cork in a bottle. A second piece of flat mesh may be placed over the plug to prevent future hernias at the same site.
  - The wound is closed with sutures.
  - Another method for hernia repair is through the laparoscope. The laparoscope is introduced through a small incision at the navel. Two or three small incisions are made and the hernia is repaired from the inside of the abdominal cavity.
  - A flat mesh is placed over the internal inguinal ring to prevent tissues or organs from protruding through the opening.
  - Postoperatively, the patient may experience local wound pain, scrotal swelling, retention of urine, or bruising. These are temporary problems and will resolve eventually.
- Femoral hernia
  - The skin incision for a femoral hernia is similar to that of an inguinal hernia. The hernia sac is lifted and opened. Intestine or other tissue is then placed back into the abdominal cavity. The excess sac is tied off and removed.
  - The femoral canal (a space near the femoral vein that carries blood from the leg) is closed with sutures or reinforced with synthetic mesh. The skin incision may be sutured or stapled.
- Incisional hernia
  - The incision from the earlier surgery is reopened at the site of the hernia. The hernia sac is carefully dissected and opened. The intestine or other tissue is placed back into the abdominal cavity.
  - The defect is repaired or reinforced either with synthetic mesh or by pulling together and stapling the abdominal muscle tissue. The skin incision may be sutured or stapled.

- Umbilical hernia
  - A semicircular incision is made near the navel. After the navel is raised, the intestine or tissue in the hernia is placed back into the abdominal cavity. The umbilical weakness is tightened with sutures or reinforced with synthetic mesh and the navel is returned to its normal position.
  - The skin incision is closed with sutures or staples.

**Complications:**

- Chronic pain may result from surgical handling of the sensory nerve in the groin area during surgery, or after surgery from constricting scar tissue.
- Infection
- Hemorrhage
- Ischemic orchitis due to thrombosis of the spermatic cord and venous congestion produces pain and swelling
- Recurrence of the hernia due to excessive tension during repair, inadequate tissue, inadequate repair, and overlooked hernias. Recurrence rates are 1-4 %.

**Post-operative and After Care:**

- Following surgery you may be given medication to relieve pain in the area of your incision. It is normal to see some swelling and discoloration around your incision. This will disappear with time.
- After surgery, if you must lift something, lift only light objects that you can manage easily. Keep your back straight, and allow your legs to do most of the work.
- Driving may strain your incision. Ask your physician when you can drive. Do not drive while taking your pain medication.
- To avoid constipation that could cause you to strain against your incision, eat a high fiber diet and drink lots of fluids. If necessary ask your doctor about using a stool softener.
- Your doctor will be able to let you know when it is okay to work again. If you have a desk job, you may be able to return to work in a week or two. If your job requires more physical activity, you may have to wait longer.
- Your doctor may schedule a follow-up visit in about a week. During the visit, your doctor will remove stitches or staples if necessary, and check the progress of your healing.