A hernia repair is the surgical procedure to fix a hernia. This procedure is also known as herniorrhaphy. A hernia occurs when part of an internal organ or body part protrudes into an area where it should not. The most common hernias occur in the abdominal area. A hernia is usually treated with surgery. The three main types of hernia surgery are open repair, laparoscopic (minimally invasive) repair, and robotic repair. This article provides details of each procedure.

Open hernia repair is where an incision, or cut, is made in the groin. The hernia “sac” containing the bulging intestine is identified. The surgeon then pushes the hernia back into the abdomen and strengthens the abdominal wall with stitches or synthetic mesh. Most patients will be able to go home a few hours after surgery, and feel fine within a few days. Strenuous activity and exercise are restricted for four to six weeks after the surgery.

Laparoscopic (minimally invasive) hernia repair uses a laparoscope, a thin, telescope-like instrument that is inserted through a small incision at the umbilicus (belly button). This procedure is usually performed under general anesthesia, so before the surgery, you will have an evaluation of your general state of health, including a history, physical exam (and possibly lab work) and an electrocardiogram (EKG).

You will not feel pain during this surgery. The laparoscope is connected to a tiny video camera, smaller than a dime, that projects an "inside view" of your body onto television screens in the operating room.

The abdomen is inflated with a harmless gas (carbon dioxide), which creates space to allow your doctor to view your internal structures. The peritoneum (the inner lining of the abdomen) is cut to expose the weakness in the abdominal wall. Mesh is placed on the inside to cover the defects in the abdominal wall and strengthen the tissue.

After the procedure is completed, the small abdominal incisions are closed with a stitch or two or with surgical tape. Within a few months, the incisions are barely visible.

Benefits of laparoscopic hernia surgery include three tiny scars rather than one larger incision, less pain after surgery, a quicker return to work and a shorter recovery time (days instead of weeks).

The colonoscope is inserted into the rectum and a wire loop is passed through the instrument to remove the polyp.

Robotic hernia repair, like laparoscopic surgery, uses a laparoscope and is performed in the same manner (small incisions, a tiny camera, inflation of the abdomen, projecting the inside of the abdomen onto television screens).

Robotic hernia repair surgery

Robotic surgery differs from laparoscopic surgery in that the surgeon is seated at a console in the operating room, and handles the surgical instruments from the console. While robotic surgery can be used for some smaller hernias, or weak areas, it can now also be used to reconstruct the abdominal wall.

One of the biggest differences between laparoscopic surgery and robotic surgery is that the use of the robot provides excellent three-dimensional images of the inside of the abdomen (vs. the two-dimensional images of laparoscopic surgery). Robotic surgery also allows the surgeon to easily use stitches to sew tissue and meshes inside the abdomen.

Other benefits of robotic hernia surgery are that the patient has tiny scars rather than one large incision scar, and there may be less pain after this surgery compared to open surgery.

In this surgery, your abdomen is inflated with a harmless gas. This gives the surgeon a better look of your organs. They’ll make a few small incisions (cuts) near the hernia. They’ll insert a thin tube with a tiny camera on the end (laparoscope). The surgeon uses images from the laparoscope as a guide to repair the hernia with mesh. For laparoscopic surgery, you’ll receive general anesthesia.

Recovery is usually faster with laparoscopic surgery: On average, patients are back to their normal routine a week sooner than with open surgery.

What kind of surgery you’ll need often depends on the size, type, and location of your hernia. Your doctor will also consider your lifestyle, health, and age.