

When you need an operation...

About Hernia Repair

American College of Surgeons

A *hernia* (her'-ne-ah) occurs when a small sac containing tissue protrudes through an opening in the muscles of the abdominal wall. The technical name for the operation that repairs a hernia is called a *herniorrhaphy* (her'' ne-or'ah-fe). This booklet will explain:

- Why you may need to have a hernia repaired
- The ways in which a hernia can be corrected surgically
- What to expect before and after the operation

Remember, as routine as a hernia repair is (over half a million operations were done in the US last year), no two people undergoing a herniorrhaphy are alike. The reasons for and the outcome of any operation depend on your overall health, your age, the severity and size of your hernia, and the strength of your abdominal tissues.

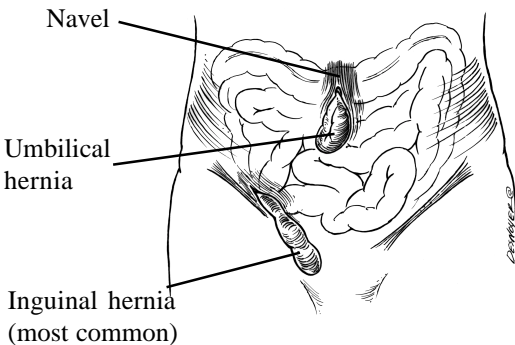
This booklet is not intended to take the place of your doctor's professional opinion. Rather, it can help you begin to understand the basics of these surgical procedures. Read this material carefully. If you have additional questions, you should discuss them openly with your doctor.

About Hernias

A hernia develops when the outer layers of the abdominal wall weaken, bulge, or actually rip. The hole in this outer layer allows the inner lining of the cavity to protrude and to form a sac. Any part of the abdominal wall can develop a hernia. However, the most common site is the groin. A hernia in the groin area is called an *inguinal* (ing'gwi-nal) hernia (inguinal is another word for groin). Inguinal hernias account for 80 percent of all hernias. In an inguinal hernia, the sac protrudes into the groin

toward and sometimes into the scrotum. Although most common in men, groin hernias can also occur in women.

Another type of hernia develops through the navel, and it is called an *umbilical* hernia. A hernia that pushes through past a surgical incision or operation site is called an *incisional* hernia. A *hiatal* hernia forms when the upper portion of the stomach slides into the chest cavity through the normal opening created by the esophagus, or food pipe.



Who Gets Hernias?

Most inguinal hernias in adults result from strain on the abdominal muscles, which have been weakened by age or by congenital factors. The types of activity associated with the appearance of an inguinal hernia include:

- Lifting heavy objects
- Sudden twists, pulls, or muscle strains
- Marked gains in weight, causing an increase in pressure on the abdominal wall
- Chronic constipation, which places a strain on the abdomen while on the toilet
- Repeated attacks of coughing

A hernia is called *reducible* if the protruding sac of tissue can be pushed back into place inside the abdo-

men. If the hernia cannot be pushed back, it is called *irreducible, incarcerated, or imprisoned*.

The symptoms of inguinal hernias vary. Sometimes the onset is gradual, with no symptoms other than the development of a bulge. Other times, the hernia will occur suddenly with a feeling that something has “given way.” This feeling can be accompanied by pain or discomfort. Signs and symptoms of inguinal hernias can include:

- Visible bulges in the scrotum, groin, or abdominal wall
- A feeling of weakness or pressure in the groin
- A burning feeling at the bulge
- A gurgling feeling

In some cases, an irreducible hernia gets so pinched that the blood supply is cut off and the tissue swells. Rapidly worsening pain or a tender lump is a signal that the hernia has strangulated. When strangulation occurs, the tissue can die quickly and become infected. Within hours this condition can lead to a life-threatening medical emergency that requires immediate medical attention.

Preparing for the Operation

Unless the hernia is strangulated, hernia repair typically is an elective operation. Only you can decide whether you ought to proceed with the repair. However, you must realize that (1) the hernia is not going to heal by itself and (2) pain may increase in the area of the hernia, and it will usually increase in size over time.

Prior to admission to the hospital, you may be given standard tests to measure your complete blood count and electrolyte levels, as well as a urinalysis. Your surgeon may require additional studies depending on your condition and age. Prior to the operation, you will dress in a surgical cap and gown, receive a sedative by injection, and have a needle placed in the

back of your hand or in your forearm for connection to an intravenous line in the operating room. In addition, the area where your incision will be made will be shaved. The procedure generally takes less than two hours. You may be given a local, spinal, or general anesthetic depending on your surgeon's preference, your age, your state of health, and the procedure's degree of difficulty.

Outpatient Surgery

Unless there is cause for concern, hernia repair can be done on an outpatient basis. On the day of your operation, you should wear loose-fitting, simple clothing to the hospital, such as a sweat suit and slip-on shoes. That way, upon discharge, you will be able to get dressed easily without too much strain or discomfort. Generally, you should not eat on the morning of your operation. You should have a friend or relative drive you home after the operation and, ideally, someone should stay with you the first night, particularly if your bedroom is on the second floor of your house because stairs will be difficult for you to climb.

Types of Procedures

Today, surgeons are performing a variety of techniques to repair hernias. You should talk with your surgeon to determine what type of repair method is appropriate for you.

The Conventional Method. In this case, an incision is made over the site of the hernia. The protruding tissue is returned to the abdominal cavity, and the sac that has formed is removed. The surgeon repairs the hole or weakness in the abdominal wall by sewing strong surrounding muscle over the defect. This is the most common method of hernia repair.

Tension-free Mesh Technique. For this technique, an incision is made at the site of the hernia and a piece of mesh is inserted to cover the area of the abdominal wall defect without sewing together the surrounding

muscles. Recovery is swift, and the likelihood of the hernia recurring is small. The mesh is safe and generally well-accepted by the body's natural tissues. However, be certain to discuss this procedure with your surgeon and understand how it will be done.

The Laparoscopic Method. A laparoscope is a long metal tube with a fiberoptic light source and a telescopic eyepiece, which is connected to a TV monitor. The scope is inserted into the abdominal cavity through a small incision and is used to view the hernia in the abdominal wall while the surgeon repairs the hernia through additional tubes that are inserted into the abdomen through separate incisions. A general anesthetic is usually required.

Some surgeons are using this technique. However, the technique is presently under evaluation, and the long-term outcome for hernias repaired using this method is currently unknown. It is important to note that this method is new, it is still being evaluated, and it is *not* an option for every patient. It is up to you and your surgeon to decide whether it is right for you.

Complications Are Few

As with any operation, infection and bleeding can occur. Most of the time, however, these problems are easily handled, without the need for a hospital stay. A slight chance also exists that the intestine or bladder can be injured during the operation. The formation of scar tissue is another possibility. Any infection associated with the operation will be treated with antibiotics, but otherwise such drugs are not typically used or required. It is important to note that since the laparoscopic method of hernia repair is relatively new, its complications are not as well defined as the complications that are associated with the other methods.

Recovery

As with any operation, the amount of pain that is experienced varies from patient to patient. A patient's discomfort also depends on the location and type of hernia that was repaired, as well as the technique that

was used to perform the repair. Generally, you will have some difficulty walking the first few hours after the operation, and climbing stairs the first couple of days. Bathing will require care so as not to wet the incision site. Sexual activity is usually too uncomfortable to enjoy the first week or two. Your surgeon will advise you regarding heavy lifting, jogging, or doing strenuous exercise depending on the type and degree of difficulty it took to do the repair. You should be able to drive your car within a few days. Depending upon your occupation, you can expect a recovery period lasting from one to six weeks.

Proper recovery is as important as the hernia repair procedure itself. During the recovery phase, the repair takes hold. The smoother your recovery, the better the chances that your hernia will not recur. While every attempt is made to minimize any recurrence, the “perfect” repair does not exist. However, the recurrence rate over many years is small, and is estimated to be about 1-5 percent.

Reviewed by:

Marvin J. Wexler, MD, FACS, FRCS, Associate Professor of Surgery, McGill University, Montreal, Quebec.

C. James Carrico, MD, FACS, Professor and Chairman, Department of Surgery, University of Texas, Dallas.

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Prepared as a public service by the
American College of Surgeons.

American College of Surgeons
633 N. Saint Clair
Chicago, IL 60611

