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A Secret for Patients Undergoing Hernia Repair



By
LAURA LANDRO

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Hernia repair, one of the most common surgical procedures, carries a risk many patients don't consider: chronic pain after surgery.

More than 30% of patients may suffer from long-term chronic pain and restricted movement after surgery to fix a hernia, a bulge of the intestine or body fat through a weak area in the abdomen, studies show. Damage to nerves and muscles from the hernia may cause lingering discomfort. New synthetic mesh devices, though better than traditional sutures at reinforcing the abdominal wall, can irritate nerves and carry a slightly higher risk of infection.

Laura Landro on Lunch Break looks at efforts to improve outcomes and reduce long-term complications for hernia repair - one of the most common but hardly risk-free elective surgical procedures.

"Doctors may often say it's just a hernia, but this is not a 100% benign procedure, and we need to help patients weigh the potential risks and benefits of surgery and say no if they need to," says B. Todd Heniford, chief of the division of gastrointestinal and minimally invasive surgery at Carolinas Medical Center in Charlotte, N.C., and president of the American Hernia Society, which represents surgeons who specialize in hernias and abdominal-wall abnormalities.

More than a million patients a year undergo surgery for some kind of hernia. About 80% are so-called inguinal hernias in the groin area. There isn't always an obvious cause. Some are hereditary or linked to weakness in the abdominal wall that may happen at birth when the abdomen lining doesn't close properly. Other types of hernias are caused by pregnancy, trauma or previous surgical incisions. Hernias can affect both adults and children, and men are most at risk.

Will Courtney, a 27-year-old in Arlington, Va., was diagnosed with an inguinal hernia when he was 22 after noticing a dull ache when he played sports. He underwent surgery using a "plug and patch technique"—a synthetic mesh plug was placed inside the hernia to reinforce and support weak tissue and a patch of the same material was placed as reinforcement before the incision was sewn up. Mr. Courtney, a commercial real-estate broker, says he could barely get out of bed the first week and it was two weeks before he could walk upright. After eight weeks it had mostly healed. But Mr. Courtney experienced searing, stabbing pain.

[Enlarge Image](#)



Will Courtney, seen stretching, needed two surgeries to fix a 2006 hernia repair. *T.J. Kirkpatrick for The Wall Street Journal*

"The risk of postoperative pain was not a question I thought about, nor was it ever discussed with me," he says.

After seeking out another surgeon, he underwent a minimally invasive laparoscopic procedure to replace the mesh plug, which had partially detached. Still, the pain continued. Mr. Courtney stopped playing sports and soon gained 25 pounds. It felt like "a knife in there," he says.

He contacted Dr. Heniford after reading one of his research papers online, and in 2009 went to Carolinas Medical Center for a third surgery to remove more of the mesh, which had become entangled with two of his nerves. Within six weeks he was running and lifting weights. He says he seldom feels discomfort now and has gone back to a sport he took up as a teenager, surfing.

Stitching It Up

The two main surgical techniques to repair an inguinal hernia in the groin area, the most common type of hernia.

- **LAPAROSCOPIC SURGERY**

Through small incisions in the abdominal wall, a surgeon inserts a thin laparoscope with a small video camera and surgical instruments. The abdomen is inflated with carbon dioxide, allowing surgeons to view the herniated intestine and pull it back into place. Mesh is placed over the hernia defect to reinforce the abdominal wall and is secured with staples, tacks or glue. General anesthesia is often used.

Pros: Recovery time is one to two weeks, with strenuous exercise after four weeks. There is reduced risk of infection, less postsurgical pain, and chance of recurrence may be lower.

Cons: It is more expensive than open surgery. General anesthesia carries risk of complications.

- **OPEN SURGERY**

The surgeon makes a long incision in the groin and the hernia bulge is pushed back into place. Weak spots in the muscle wall may be repaired by sewing the edges of healthy muscle tissue together or by sewing mesh patches over the weakened area and sealing the incision. The technique is recommended for children (without mesh) and more complex repairs.

Pros: The procedure can be performed with local anesthesia and sedation. Recovery time is about three weeks for light activity, with strenuous exercise after about six weeks.

Cons: Infection rates and risk of injury to nerves are higher. May be a slightly higher rate of recurrence.

Activities like lifting heavy weights can exacerbate an existing hernia. Smoking and obesity can increase risk because body fat puts extra pressure inside the abdomen and smoking weakens connective tissues. Not all hernias require immediate surgery, especially when there is no pain or disruption to daily activities. A special kind of belt, called a truss, can keep small hernias from bulging out, but they aren't widely recommended. They also may do more harm than good, causing formation of scar tissue that makes eventual repair more difficult.

But hernias don't go away on their own and tend to get larger and more difficult to repair with time. Worst-case scenario: They become stuck in the groin and cut off the blood supply to the intestine, a potentially life-threatening emergency.

There are two main approaches to repairing a hernia: an open repair that requires a large incision, or a minimally invasive laparoscopic technique, which uses a camera to guide instruments through a tiny incision.

Studies show that patients undergoing minimally invasive surgery have a quicker recovery and less short-term pain than with open repair. But in either surgery, small nerves can be irritated by the procedure or the repair mesh as well as by sutures or tacks used to hold the mesh against the abdominal wall.

Serious complications can occur if the surgical mesh or other devices break or become twisted or dislodged; a commonly used mesh product was recalled in 2006 by its manufacturer because of the potential for breakage inside patients, and a number of class-action suits have been brought by patients who experienced complications like bowel perforation and infection. New biologic meshes including some made from pig skin are being used in complex repairs because they can reduce the chance of infection, but they are more expensive.

Using data from a study that followed more than 1,700 patients in North America, Europe and Australia long-term after hernia repair, Dr. Heniford identified both preoperative and surgical factors associated with chronic postoperative pain. In the study, researchers used a questionnaire, called the Carolinas Comfort Scale, to assess quality of life with such questions as whether patients feel a "sensation of mesh" after surgery or pain or movement limitations during daily activities.



Mr. Courtney, of Arlington, Va., says he is mostly recovered and has gone back to playing sports. *T.J. Kirkpatrick for The Wall Street Journal*

At the hernia society's annual meeting next month in New York, Dr. Heniford plans to unveil a free app for doctors' mobile devices that helps calculate the probability that a patient will experience chronic discomfort following surgery based on prior symptoms, age and medical history. Patients who have pain before surgery have a higher chance of experiencing pain after the procedure, for example, and younger patients tend to have more discomfort than older ones. Dr. Heniford suggests that younger patients may complain more, or notice pain more because of activity, but there are no studies to back that up.

Outcomes often depend on the technical expertise of surgeons, says Guy Voeller, professor of surgery at the University of Tennessee Health Science Center. General surgeons may perform 50 hernia operations a year compared with 300 or more for a specialist. He is co-chairing a task force at the Society of American Gastrointestinal and Endoscopic Surgeons to develop programs to teach general surgeons to match patients with the most appropriate surgical approach and mesh devices.

Obese patients have a higher chance of recurrent hernias compared with patients of a normal weight, and a higher chance of infection because open repair is necessary. Surgeons often steer away obese patients until they lose weight, or perform weight-reduction surgery first.