

Facing a Hernia Repair?

Learn about minimally invasive
da Vinci® Surgery



da Vinci.Surgery

The Condition:

Hernia

A hernia happens when part of an organ or tissue bulges through a hole or weak area in the belly wall (fascia).

The type of hernia you have depends on where it is and how it occurred:¹

- **Incisional Hernias:** The hernia appears through a scar from an incision.
- **Ventral Hernia:** The hernia is on/around the belly button.
- **Inguinal Hernia:** The hernia is in the groin (more common in men).

Hernias are common and can affect men, women and children. Hernias can occur due to a congenital (birth) defect, muscle weakness, straining, or a prior surgery.

Physical activities and medical problems that increase pressure on the belly may lead to a hernia, such as: constipation, chronic cough, enlarged prostate, extra weight, fluid in the abdomen, heavy lifting, poor eating habits, smoking, and activities, like running and biking.

There are often no symptoms for a hernia, but you may feel pain while standing, straining when using the bathroom, or lifting heavy objects.²

The Surgery:

Hernia Repair Surgery

Your doctor may suggest lifestyle changes to ease your symptoms, but surgery is often the only way to truly repair a hernia.² If a child has a ventral hernia that does not heal on its own by age 5, his/her doctor may suggest surgery.² Keep in mind, all surgeries have risks and surgery may be more risky for patients with serious medical problems.

During hernia repair surgery, an incision is made near the site of the hernia. The hernia is usually repaired with mesh by stitching, stapling or clipping it to the muscle around the hernia site. The hernia site can also be sewn directly together.



Cross Section of a
Ventral Hernia



Cross Section of a
Repaired Hernia



Hernia repair can be done using traditional open surgery or minimally invasive surgery.

Open Surgery: With open surgery, a large incision is made in your abdomen that allows your surgeon's hands to reach and touch your organs.

Minimally Invasive Surgery: Minimally invasive surgery is also known as laparoscopy. It is done through a few small incisions using long, thin surgical instruments and a tiny camera. The camera takes images inside your body and sends them to a video screen in the operating room to guide doctors during surgery.

Incisional Hernia



Open Surgery
Incision

Laparoscopy
Incisions

da Vinci Surgery

Inguinal Hernia



Open Surgery
Incision

da Vinci Surgery &
Laparoscopy Incisions

da Vinci Surgery:

A Minimally Invasive Surgical Option

da Vinci Surgery is another minimally invasive surgical option for adult patients facing abdominal hernia surgery.

The *da Vinci* System features a magnified 3D HD vision system and special wristed instruments that bend and rotate far greater than the human hand. *da Vinci* technology enables your surgeon to operate with enhanced vision, precision, and control.

Early clinical data suggests:

As a result of this technology, *da Vinci* Ventral Hernia Surgery offers the following potential benefits:

- › Low rate of pain^{3,4}
- › Low rate of the hernia returning^{3,5}
- › Low rate of surgeon switching to open surgery^{3,4}
- › Short hospital stay^{4,5}

Risks & Considerations Related to Hernia Repair (ventral, incisional, umbilical, inguinal): recurrence, bowel injury, infection of mesh, urinary retention. For inguinal hernia repair: testicular injury.

Important Information for Patients:

Serious complications may occur in any surgery, including *da Vinci*® Surgery, up to and including death. Examples of serious or life-threatening complications, which may require prolonged and/or unexpected hospitalization and/or reoperation, include but are not limited to, one or more of the following: injury to tissues/organs, bleeding, infection and internal scarring that can cause long-lasting dysfunction/pain. Risks of surgery also include the potential for equipment failure and/or human error. Individual surgical results may vary.

Risks specific to minimally invasive surgery, including *da Vinci* Surgery, include but are not limited to, one or more of the following: temporary pain/nerve injury associated with positioning; temporary pain/discomfort from the use of air or gas in the procedure; a longer operation and time under anesthesia and conversion to another surgical technique. If your doctor needs to convert the surgery to another surgical technique, this could result in a longer operative time, additional time under anesthesia, additional or larger incisions and/or increased complications.

Patients who are not candidates for non-robotic minimally invasive surgery are also not candidates for *da Vinci*® Surgery. Patients should talk to their doctor to decide if *da Vinci* Surgery is right for them. Patients and doctors should review all available information on non-surgical and surgical options in order to make an informed decision. For Important Safety Information, including surgical risks, indications, and considerations and contraindications for use, please also refer to www.davincisurgery.com/safety and www.intuitivesurgical.com/safety.

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The Enabling Technology: *da Vinci* Surgical System

The *da Vinci* Surgical System is designed to provide surgeons with enhanced capabilities, including high-definition 3D vision and a magnified view. Your doctor controls the *da Vinci* System, which translates his or her hand movements into smaller, more precise movements of tiny instruments inside your body.



Though it is often called a “robot,” *da Vinci* cannot act on its own. Surgery is performed entirely by your doctor. Together, *da Vinci* technology allows your doctor to operate through just a few small openings, similar to traditional laparoscopy.

Over the last decade, the *da Vinci* System has brought minimally invasive surgery to over 3 million patients worldwide. *da Vinci* - changing the experience of surgery for people around the world.

Your doctor is one of a growing number of surgeons worldwide offering *da Vinci*® Surgery.

For more information and to find a *da Vinci* Surgeon nearest you, visit:
www.daVinciSurgery.com

¹ National Institutes of Health. Hernia. December 2014. <http://www.nlm.nih.gov/medlineplus/hernia.html>. ² National Institutes of Health. Hernia. December 2013. <http://www.nlm.nih.gov/medlineplus/ency/article/000960.htm>. ³ Tayar C, Karoui M, Cherqui D, Fagniez PL. Robot-assisted laparoscopic mesh repair of incisional hernias with exclusive intracorporeal suturing: a pilot study. *Surg Endosc*. 2007 Oct;21(10):1786-9. Epub 2007 Mar 13. ⁴ Allison N, Tieu K, Snyder B, Pigazzi A, Wilson E. Technical feasibility of robot-assisted ventral hernia repair. *World J Surg*. 2012 Feb;36(2):447-52. doi: 10.1007/s00268-011-1389-8. ⁵ Gonzalez, A. M., et al. (2014). "Laparoscopic ventral hernia repair with primary closure versus no primary closure of the defect: potential benefits of the robotic technology." *International of Medical Robots and Computer Assisted Surgery*.