

Why do we have Hernias? What is Herniosis?

Hector Valenzuela*

G.I. Surgeon - Robotic and Minimally Invasive Surgery, Hernia Specialist, Surgical Innovation and Robotic Institute, Memorial Hermann Texas Medical Center, Texas, United States

***Corresponding Author:** Hector Valenzuela, G.I. Surgeon - Robotic and Minimally Invasive Surgery, Hernia Specialist, Surgical Innovation and Robotic Institute, Memorial Hermann Texas Medical Center, Texas, United States.

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Hello dear patients and friends, I have had the pleasure of performing hernia surgery on many patients throughout 8 years practicing lakeside most patients share in common questions such as Where hernias come from? Or why some people get them and some do not? Therefore, I thought it was important to write an article explaining a little bit about the very complex and very interesting hernia universe.

Allow me to begin by explaining what a hernia is, most think it is a lump showing underneath the skin but actually that is just one of its components, a hernia is an orifice or "Defect" in the layer of tissue that provides strength to the abdominal wall called "fascia", as a result the contents of the abdominal cavity will be allowed to come out through such defect and cause a lump to appear.

The components of the hernia then are, the defect or orifice, the hernia sack and the "contents" of the hernia which usually can be intrabdominal fat, bowel and in rare cases body organs such as spleen, liver or urinary bladder.

Hernias are a worldwide health concern due to the percentages in which they appear, it is known that up to 20% of human beings are eventually going to present a type of hernia. the most common primary hernias are: A) Umbilical hernias with or without Rectus Muscle Diastasis followed by the B) Inguinal hernias and C) Epigastric hernias, this are hernias a person is borne with or develops them without previous surgery. D) Incisional hernias appear after a person has been operated and the area where the abdomen was opened does not heal properly causing a hernia to appear.



Figure 1

Fascia of patients prone to develop hernias was scientifically studied, it was found that human beings have up to 4 different molecules of Collagen and depending on the flexibility and strength required on the tissue is the amount and kind of collagen that will constitute such tissue, Collagen type 1 is very flexible and therefore bends and breaks easily we find it on tissues like skin and cartilage, collagen type 4 is strong but lacks flexibility, we find it in bone for example. A proper Fascia will have a 70% type 4 strong collagen and 30% type 1 flexible collagen to perform as a strong somewhat flexible dependable layer of tissue providing strength and just enough flexibility to the abdominal wall, when this ratio is inverted a person will be more susceptible to develop hernias, more flexible type 1 collagen and less strong type 4 collagen will result in weaker fascia, this phenomenon is associated to a new term called "Herniosis" being this the primary reason why a person will be borne and/or develop a hernia throughout their lives.

Usually hernias are asymptomatic and a person can go on for many years without seeking medical attention until one of three things occur:

- 1. Quality of life impaired:** A hernia can grow to a point it can limit the ability of a person to work, exercise or perform regular activities such as driving, climbing up stairs and even enjoy intimacy. Sometimes the hernia can be so voluminous and visible that may make the patient ashamed and wear clothes on a larger size, avoid swimsuits and refrain from participating on social activities.
- 2. Incarcerated Hernia:** This is a very concerning complication, this means that the contents protruding through the defect are trapped not being able to return inside the abdomen, usually associated with distress to the compromised organ. Symptoms are: non reducible lump, abdominal bloating, difficulty producing a bowel movements and diverse digestive abnormalities. A person with an incarcerated hernia should seek immediate medical attention.
- 3. Strangled Hernia:** This is a serious life threatening complication, it occurs when the blood supply to the incarcerated organ is compromised resulting in tissue death, within minutes in oxygen deprivation the cells in the compromised organ start to die and bacteria overcome the tissue bringing the patient to possibly present with bowel perforation, peritonitis and abdominal sepsis. The hernia becomes a secondary priority as most patients will have emergency surgery to remove the damaged organ and preserve life. Usually the hernia cant be properly addressed in the same surgery, hospital stay and further complications are unpredictable and frequently associated.

How to diagnose?

A medical physical exam by an expert herniologist cannot be substituted but sometimes an Ultrasound and more so a CT-Scan are ideal to accurately measure the size of the hernia and its relation with the local anatomy which is fundamental to plan the proper hernia repair. Hernia surgery requires a tailored approach.

When should a hernia be fixed?

It's impossible to predict when and if a hernia is going to present with a complication but it is in its nature to grow and compromise quality of life. You should seek evaluation by a hernia specialist if you suspect you have a hernia, sometimes surgery can take place soon after but there are protocols to be followed in patients with other health issues or when the hernia is large and requires further preparation of the abdominal wall, nutritional status or grafts.

Why is mesh recommended?

As we now understand tissue endurance plays a great role in hernia development, tissue that have failed is very likely to fail again and reoccurrence rate is much greater in patients that seek "non mesh" repairs. Currently very safe, well accepted and durable prosthetic mesh products are available in the market, these are placed in a way they become integrated into the abdominal wall making them non-visible after a while but reinforce the whole area bringing hernia reoccurrence rate close to zero.

What about collagen supplements?

There is no scientific data that describes how can a collagen molecule be extracted from a source, adequately digested by the bowel and arrive to the target organ therefore we do not recognize collagen supplements play an important role in hernia therapy and will not be money well spent.

What types of surgery can be done?

Hernia surgery offers a wide variety of options that go from small local anesthetic outpatient procedures to minimally invasive Laparoscopic or Robotic surgery with superb results and restoration to normal lifestyle and in some cases in large complex hernias a traditional open surgery approach with full abdominal wall reconstruction with a slower recovery aiming permanent results as well as full lifestyle restoration. As I mentioned before every patient with a hernia is addressed individually and surgery is personalized.

Will I be impaired to work or exercise permanently?

Only temporarily, depending on the type of surgery recovery time can range from 2 weeks to 3 months, it is important to allow tissues to heal and integrate the mesh before stress is applied again, gradually activities are reintroduced a week at the time the goal being that all patients go back to their regular life style and continue to enjoy sports and hobbies they like permanently soon enough.

Robotic surgery

This has come to change in many ways surgeons and patients experience in the hernia field, Robotic surgery provides enhanced 3D High definition anatomy identification, minimal tissue stress and the post-surgical feeling as if no surgery took place. Its made obsolete the use of uncomfortable drains, large dressings and long term voluminous abdominal binders. Cutting edge technology with permanent reliable results meet in this particular surgical approach.

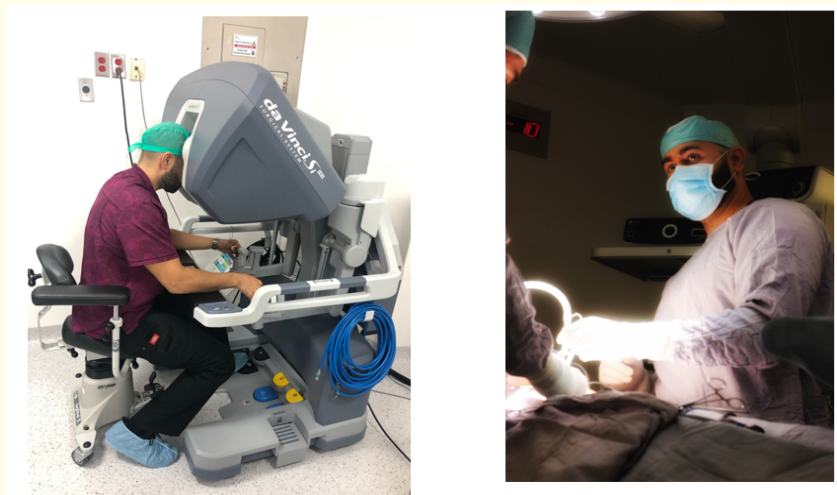


Figure 2

What you just read is just the tip of the iceberg in a very complex but very fascinating world full of scientific data and technology features that make it a full separate chapter in the surgery field. Many years ago hernias were thought to be the easy surgery that the newest least experienced surgeon should start with, nowadays hernias are treated with the outmost respect and it takes a knowledgeable skilled

and experienced surgeon to care and provide results that will return your quality of life, prevent further complications and help you safely go back to your regular activities.

Please do not hesitate to visit me at QC Doctors if you wish to learn more about this subject or have a proper evaluation on that hernia you have been delaying to treat.

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