

# Inguinal Hernia.

## What is an inguinal hernia?

A hernia occurs in children when a portion of an organ within the abdomen, such as the intestines, protrudes through an opening between the abdomen and groin. A soft bulge is seen underneath the skin where the hernia is located. A hernia that occurs in the groin (inguinal) area is called an inguinal hernia.

## What causes it?

Between 12 to 14 weeks of fetal development, the testicles or ovaries form in the abdomen near the kidneys. They gradually move down into the lower part of the abdomen as the baby continues to develop. As they move down, a portion of the peritoneum (a thin layer of tissue that lines the inside of the abdomen) that attaches to the testicle is drawn with it into the scrotum, forming a pouch or sac. A similar process occurs in girls as the round ligament of the uterus descends into the groin at the labia. This sac is known as the processus vaginalis and normally closes shortly after birth. This eliminates any connection between the abdominal cavity and the scrotum or groin. When closure of the processus vaginalis is delayed or incomplete, it may stretch and eventually become a hernia. The stretching of the processus vaginalis creates an inguinal sac, allowing organs to extend from the abdomen and enter the sac. If fluid, rather than organs, builds up and remains in the sac, the child has a hydrocele. Approximately 80% to 90% of inguinal hernias appear in boys. They are more common on the right side, but in about 10% of cases, they occur on both sides (bilaterally).

## When does an inguinal hernia appear?

An inguinal hernia can occur at any age, but one-third of hernias in children appear in the first six months of life.

## Are there any risk factors in the development of an inguinal hernia?

- In just over 10% of cases, other members of the family may have had a hernia at birth or in infancy
- In premature infants, the occurrence of inguinal hernia is increased by up to 30%

## What are the signs and symptoms of an inguinal hernia?

Swelling or a bulge in the groin or scrotum may be seen during crying or straining, and it may get smaller or go away when the baby relaxes. It is a smooth mass that is usually not tender

- The diagnosis is made by a thorough medical history and careful physical examination by a physician.

## What is an incarcerated inguinal hernia?

If the bulge can be gently pressed back into the abdomen, the hernia is termed reducible. If it cannot be pressed back into the abdomen, the hernia is known as incarcerated (irreducible). When a hernia becomes incarcerated, infants or children will show signs of irritability and may vomit. They may also have loss of appetite, abnormal bowel patterns, and / or tenderness of the groin area and swelling of the abdomen. With a prolonged period of incarceration, the blood supply to the intestine

could be cut off, causing it to die. This is referred to as a strangulated hernia -- a life-threatening situation that requires urgent surgical attention.

### How is an inguinal hernia treated?

Inguinal hernias require an operation, and to avoid the risk of abdominal organs becoming incarcerated, this is generally done as soon as possible. In premature infants, this may be done shortly before they are discharged from the hospital. Surgery is performed under general anesthesia. For boys, a small incision is made in the groin. The surgeon may recommend that a camera be placed through the existing hernia sac to evaluate the other side for a hernia. If there is also a hernia on the other side, it can then be repaired under the same anesthetic using a small incision on the other side. The hernia sac is identified and repaired with dissolving stitches. Tissue glue is used to seal the surface of the incision.

For girls, hernias are usually repaired through an umbilical incision with tiny incisions for the instruments to be used on the abdomen. During the procedure, a generous amount of long-acting numbing medicine (local anesthetic) is injected around the incisions to help control pain.

Most children who undergo hernia repairs go home the same day after a short stay in recovery; however, premature infants or children with special health problems may require an overnight stay. Most children are able to return to normal activities, even sports, with minimal restrictions within a few days to a few weeks. The length of time sports activities are restricted depends on the age of the child and the sports activity. In some cases the scrotum may swell or bruise after surgery. It may appear as though the hernia has come back. This is normal and will go away on its own within **several weeks to months**.

### What is the long-term outlook?

After surgery, the risk of the hernia returning is extremely low. However, the risk is known to be higher in premature infants and those who have an infection in their wounds.

### Special Instructions for the Day of Surgery

You will be called by our office on the day before surgery with instructions about the time to be at the hospital and the time your child should stop eating and drinking the day of surgery. You will be given written instructions for medications, incision care, and activity restrictions, if any, on the day of surgery before you are discharged home from the hospital.

### Special Instructions after Surgery

- No contact sports for at least one week.
- Any umbilical dressings will be removed 2 days after surgery. No ointments are to be used on incisions.
- Sponge bathe for 5 days then as usual.
- No swimming in a public water source (rivers, lakes, ponds, pools, or streams). Private pool is ok after 1 week.
- No other activity restrictions.
- There will be instructions for taking ibuprofen and a narcotic pain prescription to control any pain.