



Pediatric Hernia



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Pediatric Hernias: Definitions, Diagnosis and Treatment

Hernia repair is among the most common type of general surgical procedure performed in children each year. The two most common types of congenital hernias in children are umbilical and inguinal hernias. The information below offers information on symptoms, diagnosis and treatment of these medical conditions.

Umbilical Hernia

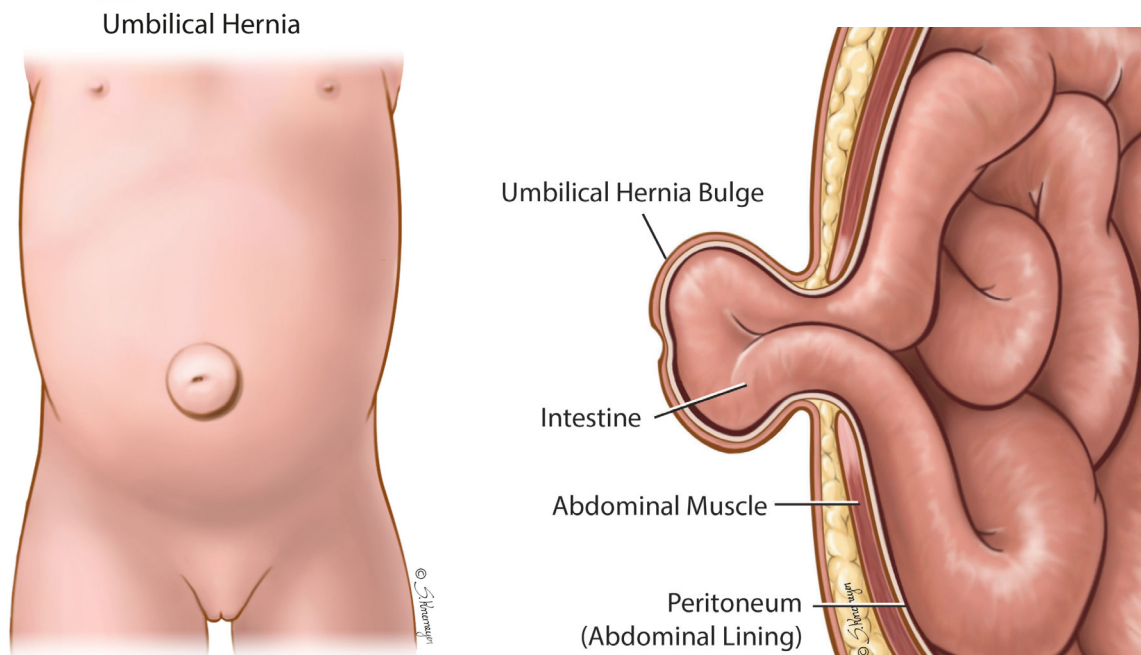
Umbilical hernias are fairly common among newborns and infants younger than 6 months. Caused when the umbilical ring fails to close after birth, umbilical hernias present as an outward bulging in the abdominal area at the umbilicus. Umbilical hernias can vary in width from less than 1 cm to more than 5 cm and may seem to expand when the child cries or strains. Although the exact incidence of umbilical hernias in children is unknown, they are reported slightly more often in African Americans.

Symptoms and Diagnosis

- Present as a soft swelling at the navel that bulges when the baby or child sits up, cries or strains and usually disappears when the baby or child lies flat.
- Usually painless.
- Often detected on physical exam, without the need for additional testing.

Treatment

- Often closes by 1 or 2 years of age.
- Surgery needed when hernia has not closed by 2 to 4 years of age.
- Emergency surgery required if intestinal blood supply is cut off (strangulation).

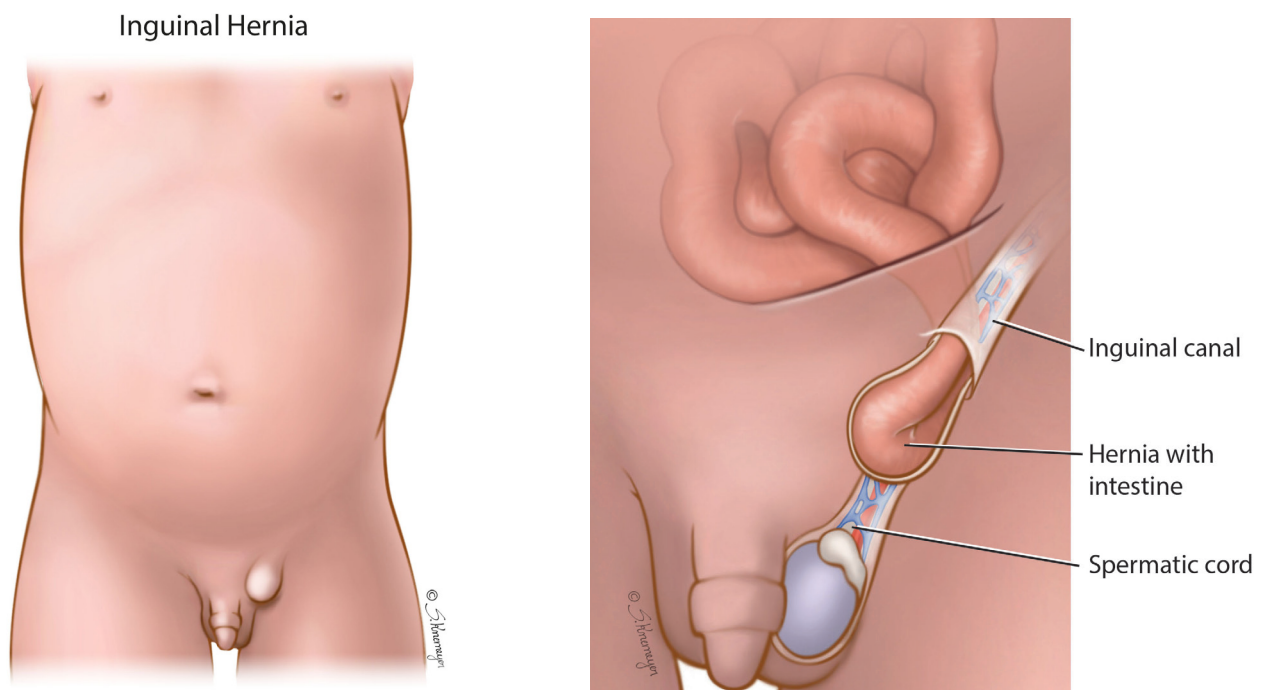


Inguinal Hernias

There are two types of inguinal hernias — direct and indirect. Direct inguinal hernias are very rare in children and are caused by a weakness in the abdominal wall that allows intestines to protrude through. Indirect inguinal hernias are the most common type of inguinal hernia in children. Indirect inguinal hernias are caused when the inguinal canal fails to close during fetal development and abdominal contents protrude through the opening. Although the defect is present at birth, it is often not visible until weeks, months or years later.

The incidence of indirect inguinal hernias is approximately three to five percent in term infants and 13 percent among infants born at less than 33 weeks of gestational age. Among premature infants born with an indirect inguinal hernia, there is a 60 percent higher risk of incarceration (when part of the fat or small intestine protruding from the abdomen becomes stuck in the inguinal canal or scrotum). Indirect inguinal hernias are much more common in males than in females.

Inguinal hernias can be repaired through an incision in the groin (open herniorrhaphy) but can also be repaired using a minimally invasive approach (laparoscopic herniorrhaphy). In older patients, laparoscopic herniorrhaphy may involve the use of a synthetic mesh to aid in the repair.



Symptoms and Diagnosis

- Presence of a small bulge above the groin crease between the lower abdomen and thigh. The bulge may increase in size over time and usually disappears when the child is lying down.
- Discomfort or pain in the groin, especially when straining, coughing or playing, that improves when the child is at rest.
- Burning or aching in the groin (uncommon).
- Male children may have a swollen or an enlarged scrotum.

[continued]

Patients may experience some combination or all of the noted symptoms. Indirect inguinal hernias are usually detectable on physical exam without additional studies, but workup may infrequently also involve imaging tests, such as an ultrasound exam.

In some cases, the defect in the inguinal canal is very narrow, and the child develops a hydrocele (a collection of fluid that appears as a unilateral or bilateral swelling in the scrotum) instead of a hernia. The hydrocele may fluctuate in size, often being noticeably larger in the evening and smaller in the morning in ambulatory patients. The scrotum appears enlarged with fluid; it may be very tense, is usually nontender and is often bluish in color. Hydroceles are often managed by observation during the first and second years of life. If the condition does not resolve by two years of age, surgery is recommended.

Treatment

Inguinal hernias do not heal on their own and must be repaired surgically to prevent intestinal strangulation or incarceration. Surgery, called a herniorrhaphy, is recommended for all pediatric patients with inguinal hernias. During the procedure, a surgeon will make an incision in the groin, move the contents of the hernia back into the abdomen, and close the opening between the abdominal cavity and inguinal area (the hernia sac) with stitches. Inguinal hernias can be repaired through an incision in the groin (open herniorrhaphy) but can also be repaired using a minimally invasive approach (laparoscopic herniorrhaphy). In older patients, laparoscopic herniorrhaphy may involve the use of a synthetic mesh to aid in the repair.

Sources: American College of Surgeons; National Institute of Diabetes and Digestive and Kidney Diseases, part of the National Institutes of Health

Referrals and Consultations

Online: [NationwideChildrens.org/Surgery](https://www.nationwidechildrens.org/surgery)

Phone: (614) 722-6200 or (877) 722-6220 | Fax: (614) 722-4000

Physician Direct Connect Line for 24-hour urgent physician consultations:

(614) 355-0221 or (877) 355-0221.

