

# Inguinal Hernia in Children

- The processus vaginalis (PV) is a finger-like projection of peritoneum that is dragged down with the testis as it descends into the scrotum
- Around the time of birth or shortly thereafter, the PV obliterates, leaving no communication between the peritoneal cavity and the inguinal canal or scrotum

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- Unlike adults, whose hernias may also be due to a defect in the floor of the inguinal canal (a so-called “direct” hernia), 99% of pediatric groin hernias are due to a patent processus vaginalis (PPV) (an “indirect” hernia): the PV does not obliterate, leaving a potential space anywhere along its path in the inguinal canal all the way from the peritoneal cavity at the top to the scrotum at the bottom
- Autopsy studies have shown that:
  - The incidence of PPV in infants is 80-94% but many close spontaneously in the 1<sup>st</sup> two years of life
  - The incidence in adults is 20-30%
- 60% of infants with unilateral hernias have a contralateral PPV
  - <50% become clinical hernias: a PPV doesn't mean a child will definitely develop a hernia

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- A hernia occurs when a loop of bowel, or in girls, an ovary or fallopian tube, descends through the PPV, which is now called a hernia sac.
- The herniated organ may reside for variable periods in the sac until it spontaneously goes back, or “reduces” into the abdominal cavity or is reduced by the parent or physician.

# Danger of an inguinal hernia

- When bowel, or anything else that is in the sac does not spontaneously reduce, and cannot be manually reduced, it is referred to as “incarcerated” or, in lay terms, stuck.
- If the blood supply to the bowel or ovary is compromised because it cannot be reduced, the hernia is called “strangulated” and is a surgical emergency.
- Recurrent episodes of incarceration before a hernia is repaired can cause repeated episodes of ischemia to the testis and can result in testicular atrophy.