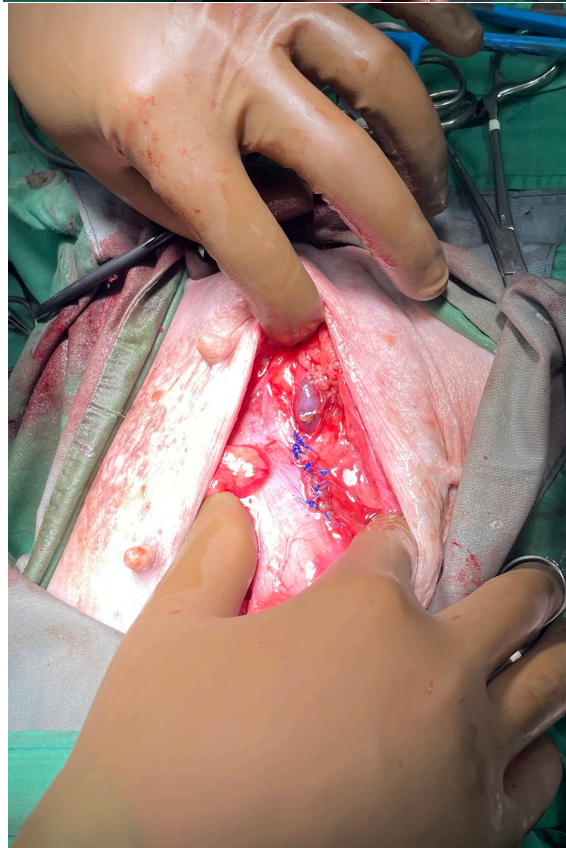


# INGUINAL HERNIA(S)



**Definition** - What is it?

**Etiology/Cause** - Why did this happen?

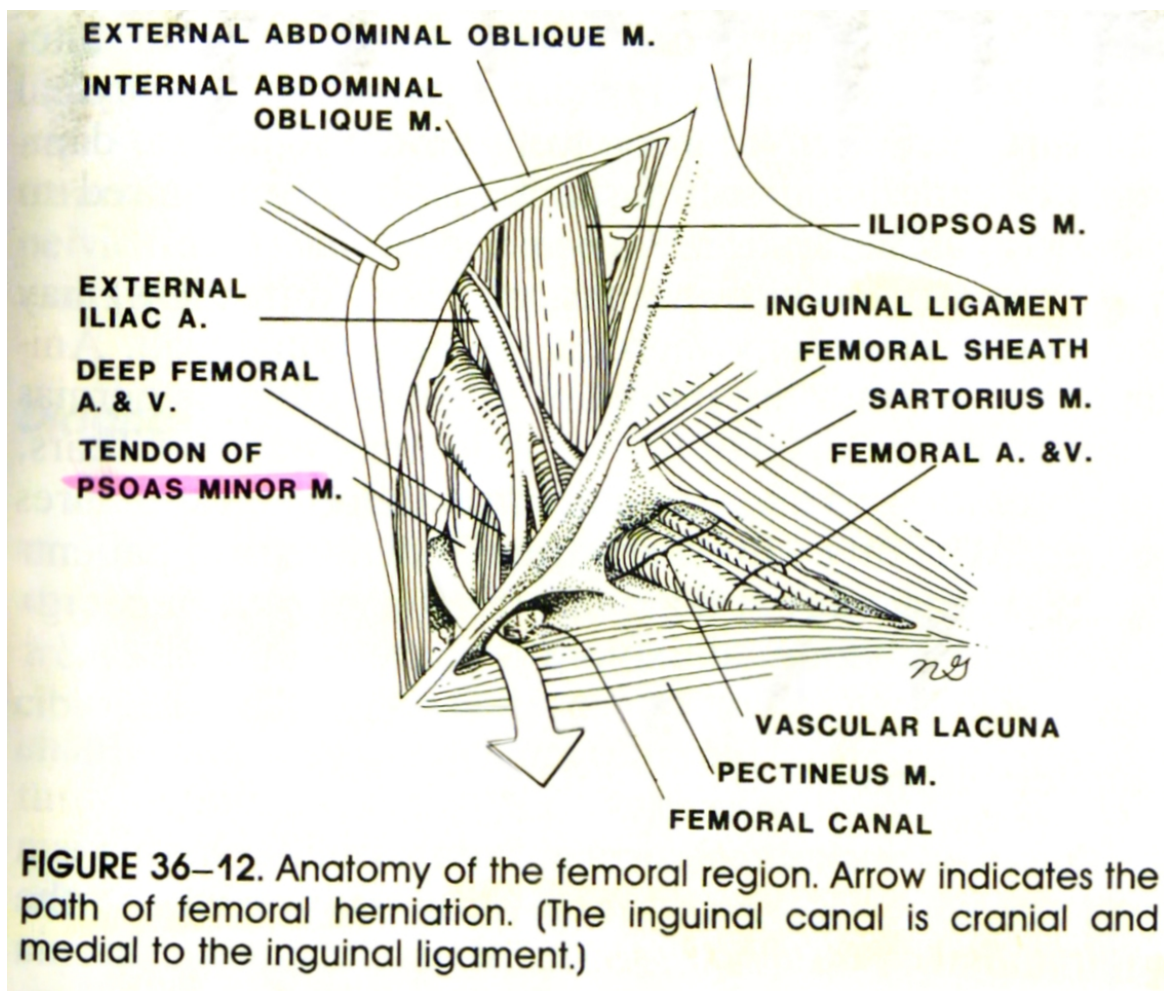
**Clinical Signs** - How do I know if my pet has an inguinal hernia?

**Diagnosis** - How does my veterinarian confirm an inguinal hernia?

**Treatment** - What should I do about it?

**Post-OP Care** - What can I expect after surgery?

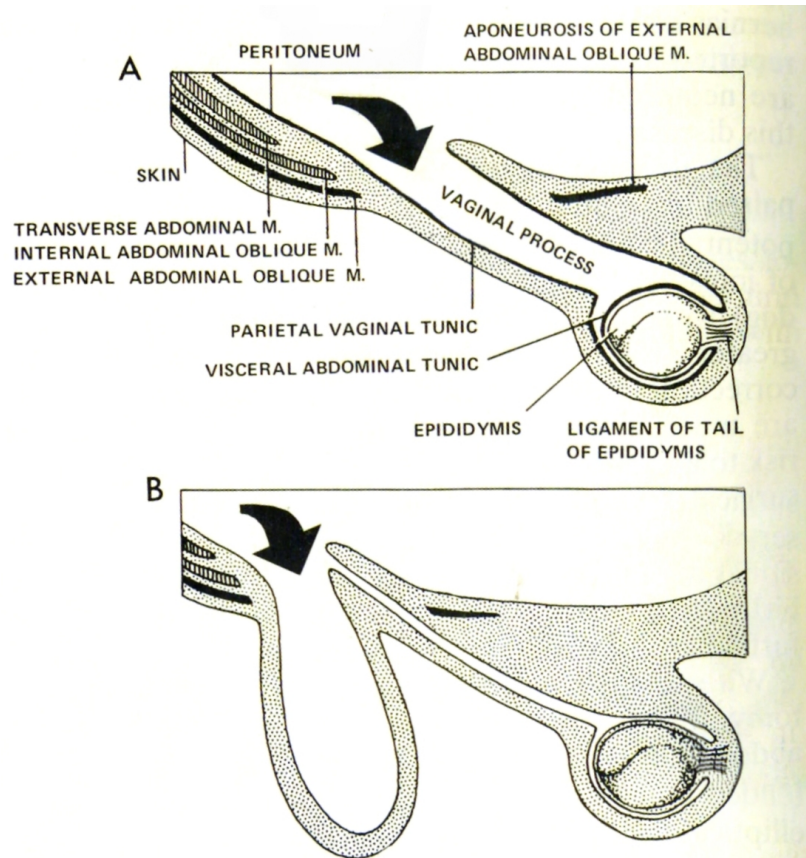
**Prognosis** - Will my pet be OK?





## DEFINITION

Herniation/protrusion of abdominal contents through the naturally existing inguinal ring (which contains arteries, veins, & nerves)



**FIGURE 36–4.** Sagittal section of the inguinal canal and vaginal process in a male dog. Arrows indicate path of herniation in indirect (A) and direct (B) inguinal hernias.

- **Direct hernias** - organs or tissues pass through
- the inguinal ring adjacent to the normal evagination of the vaginal process (this is a unintentionally-confusing named tissue & **does not refer to the female vagina**)
  - Less common in small animals (and people)
  - Can be very large
- **Indirect hernias** - organs or tissues enter the cavity of the vaginal process itself
  - In males, indirect inguinal hernias are a specific sub-type known as scrotal hernias, which will be covered on a separate page.

## ETIOLOGY/CAUSES

- **Congenital (birth defect)**
  - Relatively rare
  - Often co-exist with umbilical hernias
  - Breed predisposition in Basenji, Pekingese, Basset hound, Cairn terrier, & West Highland white terrier
  - Males more common than females
  - Possibly heritable (confirmed in Golden Retrievers, Cocker Spaniels, & Dachshunds)
    - Neutering of affected pets is generally recommended
- **Acquired**
  - Relatively common in dogs
  - Most frequent in intact female dogs
  - Anatomical variation
    - Larger diameter & shorter length canals in females
  - Sex hormones
    - Estrogen especially
  - Nutritional or Metabolic status
    - Increased risk in obese animals



## CLINICAL SIGNS

- Swelling in inguinal region (groin)
  - Medial & cranial to the pelvic brim
  - Small or large
  - Contents
    - Fat/omentum
    - Intestine/bowel (possibly)
    - Less commonly bladder, uterus, or spleen
  - Unilateral (one side) or bilateral (both sides)
    - Left side more common in dogs
  - Soft & reducible unless **incarcerated** or **strangulated**
  - May cause swelling & edema of testicle in a male dog due to venous or lymphatic obstruction - may resemble scrotal hernia
- Pain on palpation (feeling/manipulation) of the swollen region if:
  - Inflammation
  - Infection
  - **Strangulation**
- Vomiting if:
  - Bowel obstruction/**strangulation**
  - Toxemia from urine obstruction
  - Pain
- Specific signs dependent on tissues involved

## DIAGNOSIS

- **History** important to determine if there is involvement of bowel or other organs
- **Palpation** (physical examination by a veterinarian)
  - Feeling the enlarged inguinal ring following reduction of the hernial contents helps confirm the hernia type
  - Be certain to examine with inguinal rings
  - If can't be reduced, the hindquarters can be elevated (reduces pressure in the back of the abdomen)
  - If non-reducible, must differentiate from mammary tumors, lipomas (fatty tumors), enlarged lymph nodes, abscesses, & hematomas
- **Radiographs (x-rays)** can confirm bowel outside the abdominal cavity (barium contrast may confirm presence of bowel if no gas seen to identify bowel)
- **Ultrasound** may rule out other causes of swelling
- **Bladder catheterization** & draining vs. contrast injection may confirm bladder involvement
- **Computed Tomography (CT/CAT scan)**
- **Surgical exploration** can be considered for a more rapid & less costly diagnosis & treatment and/or if the above diagnostics are not an option

## TREATMENT

- Surgery is the only option
  - Uncomplicated unilateral hernia
    - Incise over the hernia sac & reduce the contents
  - Approach the hernia from the abdomen if organs are traumatized or incarcerated
    - Remove any devitalized tissue
  - Ligate the hernial sac as close to the inguinal ring as possible, & remove the distal portion of the sac
  - Partial closure of the femoral canal with care not to compress the vital neurovascular structures
  - Muscle repair with trauma
  - Surgical mesh (Prolene) can be used to close larger defects or when the muscle is more friable (fragile)

## POST-OPERATIVE CARE

- Appropriate **pain management** (**Nocita** will be given, which is a 3-day long lasting block for numbing).
- Primapore: a non-adherent band aid with antibiotic ointment will be applied. This band aid can come off after 5 days unless dirty or soil then it must come off sooner.
- Pet may be reluctant due to stretching & motion in the repair
- **Hematoma** less likely with appropriate hemostasis (control of bleeding during surgery)
- Infection/abscessation less likely, but may require opening of the skin & subcutaneous tissues
- If applicable, a **drain** may be used if there is a large volume of dead space (gaps between tissue planes), or if there is significant inflammation or tissue damage
- **Controlled leash walking**
  - Beneficial for decreasing post-operative edema
  - Crate restriction when not being walked
  - Prevent excess activity, which could break down the repair
  - Sedation may be helpful to prevent excess activity in crate
- **E-Collar**: mandatory for at least 2 weeks.
- Body Suit (optional) to cover the incision area.

## PROGNOSIS

- Generally good
- Recurrence is unlikely with appropriate post-op exercise restriction
- Your pet can generally return to a normal life

If you have any questions, please feel free to ask your primary veterinarian &/or veterinary surgeon.

TREAT Veterinary Surgery Service  
Dr. Le-Nguyen, DVM (Practice Limited to Surgery)  
(916) 230-8103  
treatveterinarysurgeryservice@gmail.com  
<https://treatveterinarysurgeryservice.com>