Undescended Testis (aka Cryptorchidism)

Undescended testis (UDT), also known as cryptorchidism, is a congenital condition in which the testicle fails to descend into a location in the lower half of the respective hemiscrotum. One of the most common developmental anomalies, with 30% incidence in preemie infants, 3% full-term infants, and 1% in toddlers. UDT may present as:

- **Undescended/cryptorchid** — testis is not in scrotum and cannot be manipulated into the scrotum
- **Ectopic** — testis is not in scrotum and is not along path of normal descent (may be in thigh or perineum)
- **Retractile** — testis is not in scrotum, but can be manipulated into the hemiscrotum where it remains once traction on the testis is released
- **Ascended** — testis was previously documented as located in the hemiscrotum and is now out of the scrotum.

**ASSESSMENT**

Obtain a detailed history, focusing on gestational age, maternal medication use during pregnancy, and family history of undescended testes or chromosomal abnormalities. Perform complete physical exam focused on the abdomen and genitalia, with child in frog leg position. During exam, prevent stimulation of the cremasteric reflex and close the ipsilateral inguinal ring to prevent the testis from retracting into the inguinal canal. Enhance exam results by ensuring room is warm and comfortable, and use liquid soap on your hands to examine. There is no need for medical imaging.

**WHEN TO REFER**

Refer all children >4 months but <9 months, in whom both testes are not in the dependent position of the hemiscroti, to Cincinnati Children’s Urology or Pediatric Surgery to enable correction. No further investigations or imaging studies are necessary prior to referral.

Refer patients aged 4+ months with any UDT for assessment. Reassure family when retractile testis is present, and reassess at later appointments. Recommend scrotal orchiopexy when retractile testis persist beyond age 5 years. Recommend surgical orchiopexy (palpable) or laparoscopic orchiopexy (non-palpable) if true UDT is present.

If you have clinical questions about patients with UDT, email PedsUrology@cchmc.org OR PediatricSurgery@cchmc.org.

If you would like additional copies of this tool, or would like more information, please contact the Physician Outreach and Engagement team at Cincinnati Children’s.

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**FAST FACTS**

- **3%** of boys will present with a UDT
- **2 – 3%** lifetime risk (4x average risk) of testicular cancer if the testis remains in the abdomen
- **12 months** age before which surgical intervention is recommended to help prevent infertility
- **4 months** age after which observation is no longer beneficial, because UDT is unlikely to descend further

**HPE RED FLAGS**

**Situational history**
- Premature infant
- Age <3 months or over 14 years
- Presence of inguinal hernia or patent processus vaginalis
- Presence of abdominal wall defects
- Congenital syndromes; i.e. CHARGE syndrome
- Previous history of inguinal surgery

**Family history**
- Maternal medication use during pregnancy (i.e., hormonal replacement)
- Maternal diabetes
- Family history of UDT
- Family history of disorders of sex development

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Educate your teenage male patients on the following:

- Testicular pain is never normal. Intense pain, especially with vomiting, should be sent to CCE to rule out torsion. There is only a 6-hour window to ensure survival of the testis.
- Wear a hard scrotal protector (cup) during all contact sports.
- Teach all boys 14+ to self-examine their testicles b/m, bringing any mass/lump to your attention.

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Tool developed by Cincinnati Children’s physician-hospital organization (known as Tri-State Child Health Services, Inc.) and staff in the James M. Anderson Center for Health Systems Excellence. Developed using expert consensus and informed by Best Evidence Statements, Care Practice Guidelines, and other evidence-based documents as available. For Evidence-Based Care Guidelines and references, see www.cincinnatichildrens.org/evidence.
Undescended Testis

**Undescended Testis**
(Child > 4 months — Refer for assessment to Pediatric Urology or Pediatric Surgery)

**Palpable Testis**

**Unilateral**
- 6 mos – 14 yrs
  - Orchiopexy
  - Normal
  - Scrotal Approach

**Bilateral**
- 6 mos – 14 yrs
  - Orchiopexy
  - Abnormal
  - Inguinal Approach

**Non-Palpable Testis**

**Unilateral**
- Biopsy
- Karyotype
- Normal
  - Diagnostic Laparoscopy

**Bilateral UDT**
- If associated with hypospadias
  - Biopsy
  - Orchiopexy or Orchiectomy based on biopsy results

**>14 yrs – consider Laparoscopic Orchiectomy**

**If Scrotum is Hypoplastic** — Consider bringing one side down first. Wait 2 – 3 mos to allow scrotum to grow and do 2nd side.

*If Solitary Testis — Consider Orchiopexy with Strict Regular Surveillance Recommended for Neoplastic Changes*

For urgent issues, or to speak with the specialist on call 24/7, call the Physician Priority Link at 1-888-636-7997.