



Pediatric Undescended Testicle (Cryptorchidism): Definitions, Diagnosis and Treatment



When your child needs a hospital, everything matters.

What is Cryptorchidism?

Undescended testicles (UDTs), also called cryptorchidism, occur in 3% of term and up to 33% of preterm boys. An UDT has not completed its expected path of descent from an intra-abdominal location to the dependent scrotum. Between 55-66% of testicles initially palpated in the groin will descend to the scrotum in the first few months of life, but they rarely continue to descend after 6 months age (corrected for gestational age).

Inguinal Testicle

The majority of UDTs are located in the inguinal canal somewhere between the internal and external inguinal ring along their expected course of descent. All patients with inguinal testicle(s) should be referred to a urologist for surgical assessment if not resolved by 6 months of life (corrected for gestational age).

Symptoms and Diagnosis

- Usually painless
- Can present with associated inguinal hernia or testicular torsion (rare)
- Often detected on routine physical exam, without additional testing required
- Ultrasound imaging is not indicated for a palpated undescended testicle

Treatment

- Surgical intervention for most patients once 6 months age (corrected for gestational age)
- If medical comorbidities, delayed intervention often considered
- Medical therapies (LHRH and/or hCG) are not considered standard of care in the United States

Nonpalpable Testicle

A nonpalpable testicle is defined by no testicular tissue identified on one or both sides during physical exam. All patients with nonpalpable testicle(s) should be referred to a urologist for surgical assessment by 6 months of life (corrected for gestational age).

A nonpalpable testicle on exam could represent various clinical scenarios

1. Testicular agenesis – testicle never present
2. Vanishing testicle – testicular loss due to vascular compromise
3. Intra-abdominal testicle – intra-abdominal location of normal or atrophic testicle
4. Inguinal testicle of small size or with difficult exam – inguinal testicles can often be misdiagnosed as nonpalpable due to small size or patient noncompliance during exam and/or large fat pad overlying testicle

Symptoms and Diagnosis

- Usually painless
- Diagnosed by inability to palpate any testicular tissue on one or both sides
- Ultrasound imaging rarely indicated in case of unilateral or bilateral non-palpable testicles**

[Exception] If the patient is severely obese, rendering a physical exam inconclusive, ultrasound may be helpful in diagnosis. Additionally, if a disorder of sexual differentiation at birth is suspected, an ultrasound may provide diagnostic information prior to genetic and blood testing.**

Treatment

- Surgical exploration is indicated in all cases of nonpalpable testicles to confirm testicular location or testicular absence.
- Surgical intervention recommended for most patients once 6 months age (corrected for gestational age); however, it may be delayed if other medical comorbidities.
- Medical therapies (LHRH and/or hCG) are not considered standard of care in the United States due to lack of evidence supporting clinical improvement.

Retractile Testicles

Retractile testicles represent normal male development and, unlike true cryptorchidism, are not associated with any long-term malignancy or fertility concerns.

Symptoms and Diagnosis

- Usually painless, however the rare patient may report discomfort when the testicle ascends. Surgical correction may improve that discomfort
- Diagnosed by the brisk retraction of the testicle from a dependent scrotal position to the inguinal canal due to the cremasteric muscle reflex
- Differentiated from a true cryptorchid testicle by the ability to manipulate the testicle back to a dependent scrotal position in the absence of persistent upward pulling tension
- Ultrasound is never indicated to make the diagnosis of retractile testicles, as they will often retract into the inguinal canal at the time of ultrasound gel application

Treatment

No treatment is indicated for the vast majority of retractile testicles, unless the patient describes pain with retraction or the patient is approaching pubertal years without any improvement.

Despite the benign nature of retractile testicles, testicular ascent into a cryptorchid position can occur. Thus, all patients should undergo at least yearly primary care provider exams where both testicles should be documented in the scrotum and families (patient, when age appropriate) should be instructed to look and feel for the testicles while the child is in a relaxed warm environment like the bath. Concern for testicular ascent should prompt a referral to a urologist.

Referrals and Consultations

Online: NationwideChildrens.org/Urology

Email: Urology_Specialty_Scheduling@NationwideChildrens.org

Appointment Line: (614) 722-6200 | For Urgent Appointments or Complex Issues: (614) 722-3115

Physician Direct Connect Line for 24-hour urgent physician consultations: (614) 355-0221 or (877) 355-0221

