

# Pediatric Urology Associates, Ltd.

## & Pediatric Enuresis Center of Arizona

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### UNDESCENDED TESTICLES

The testicle is responsible for the production of male hormone and also sperm. The term undescended testicle is used when a testicle cannot be found in its normal position in the scrotum. Before the child is born the testis migrates down from high in the abdomen and passes through abdominal wall and groin to take its normal position in the scrotum. Up to 4% of term infants will have an undescended testicle, with an even higher incidence in premature males. Spontaneous descent into the scrotum will occur in three-fourths of undescended testicles during the first three months of life.

Most undescended testicles are palpable in the groin, but some are nonpalpable, being intra-abdominal or absent. Retractable testicles are not truly undescended but withdraw into a position outside of the scrotum because of a hyperactive cremasteric reflex. Retractable testicles can be manipulated into the scrotum but some go on to become undescended as the child grows.

### INDICATIONS FOR TREATMENT OF UNDESCENDED TESTICLES

In humans, the scrotal location of the testicles keeps them 2 to 3 degrees Centigrade cooler than the core body temperature. This lower temperature is important for the development of the testis as well as for production of fertile sperm. Studies have shown that there is an increased risk of infertility in men with a history of undescended testis. Relocating the testis into the scrotum may decrease the risk of fertility problems, particularly if done at an early age. There are other advantages to a location within the scrotum. There is a cosmetic advantage and treatment of the undescended testicle also alleviates any psychological effects resulting from an empty scrotum. The scrotal testis may be less amenable to injury than a testis outside the scrotum in that the latter may be anchored in position directly over the pubic bone.

Finally, and perhaps as important as any other reason, a testis that has not made it into the scrotum is not accessible to physical examination. Undescended testicles are at increased risk for testicular cancer. Although testis cancer is uncommon, it is the most common solid tumor in men up to age 40 years. Testicular carcinoma is highly curable, when detected early, and the best way to do this is monthly self-examination which is only feasible in testes that lie within the scrotum.

Treatment for the undescended testicle can be undertaken anytime after 6-9 months of age. Hormonal treatment for an undescended testicle may be considered, but the success rate is below 10% when retractile testicles are excluded from the treatment groups. Hormonal therapy is contraindicated in children with a clinically apparent hernia. The surgical treatment for an undescended testicle is called an orchiopexy. Palpable undescended testicles are found through a small inguinal skin incision. Most undescended testes are associated with a hernia that must be repaired. After the hernia is repaired and we have obtained adequate length of the spermatic cord (blood supply to the testis), the testicle is tunneled into the scrotum where a small pouch is made for the testicle through a small scrotal incision. This operation requires general anesthesia but is performed in an out-patient setting.

Nonpalpable undescended testicles require surgical exploration, since there is no reliable x-ray imaging study that can prove the absence of a testicle. Some boys will be found to have very small abnormal gonads that we will remove (**orchietomy**). Most of these children probably had torsion or twisting of the testis on its blood supply prior to birth that led to the small testis. When a boy is left with a single functioning testis we may recommend anchoring it to minimize chances of losing it to torsion later in life.