

## Cryptorchidism (Retained Testicles)

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### VP Client Information Sheets

Cryptorchidism is a condition in which a male's testicles have not descended (dropped) into the scrotum. At birth, a male puppy's or kitten's testicles are located near the inguinal ring. By 2 to 3 weeks of age, they're in the puppy's scrotum. By 6 months of age, they're palpable in the kitten's scrotum.

In the fetus, a structure called the gubernaculum connects the testicle (located next to the kidney during development) to the scrotum. If this structure fails to develop properly, the testicle will not end up in the scrotum, but will end up in the abdomen, the inguinal canal, etc.

Cryptorchidism can be unilateral (only occurring on one side) or bilateral (occurring on both sides). Unilateral cryptorchidism usually involves the right testicle. Bilaterally cryptorchid animals are usually sterile because the higher body temperature inside the abdomen is enough to prevent sperm production. (The animals will, however, still exhibit male behaviors.)

Cryptorchidism is a fairly common defect in dogs. Dog breeds most likely to be affected include Yorkshire terrier, Pomeranian, French poodle, Siberian husky, miniature schnauzer, Shetland sheepdog, Chihuahua, German shepherd, dachshund, and brachycephalic breeds, but it can happen in any breed or mixed breed. It's considered to be an X-linked, autosomal-recessive trait. If an animal is cryptorchid, he should not be used for breeding. Dogs with cryptorchid testicles are prone to testicular torsion and testicular cancer, so these dogs should be neutered to prevent problems later.

Cryptorchidism in cats is uncommon. The most common breed associated with cryptorchidism is the Persian. Congenital abnormalities that have been known to occur simultaneously with cryptorchidism are: patellar luxation, shortened tail, kinked tail, tetralogy of Fallot, tarsal deformity, microphthalmia, and upper eyelid agenesis. Unlike dogs, it may be possible to visually differentiate between a castrated cat and one with retained testicles, because cryptorchid cats have barbs on the penis.

### Laboratory Diagnosis

A testosterone assay can be used to differentiate between a castrated male and a cryptorchid male.

### Treatment

Surgical removal is the only treatment for cryptorchidism. Even if the animal is a unilateral cryptorchid, both testicles should still be surgically removed. (The cryptorchid testicle should be removed to prevent testicular torsion and testicular cancer, and the normal testicle should be removed to prevent cryptorchid offspring.) This surgery is more complicated than the usual neuter surgery, because the cryptorchid testicle can be difficult to locate. Depending on the case, some pets will be able to go home the day of the surgery, and some may have to stay in the hospital overnight. A 2-week recuperation (reduced activity) is advised because this surgery usually involves opening the abdomen, and the surgical site has to have time to heal before the pet resumes normal activities.

Many males will need to wear a protective Elizabethan collar during recuperation to prevent them from licking or chewing at the incision. Owners should check the incision regularly for redness and swelling, which could indicate a post-operative infection or self-trauma. If non-dissolvable skin sutures are used, they will need to be removed by your veterinarian at about 10 to 14 days after surgery.

### Prognosis

Cryptorchid animals that have had both testicles removed, and have no other defects, will generally live a normal lifespan for the breed.