

Dog Breeding

Important signs when breeding dogs.

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Human parents may rejoice at counting 10 fingers and toes, but dog breeders only need two to be grateful: two testicles, that is.

At birth a male puppy's testicles are still within the abdomen, slowly descending into the scrotum within 10 days. By 6 to 10 weeks they should be easily locatable. If not, there's only a small chance they'll descend. They remain soft and can move between the scrotum and inguinal canal, especially when the pup is cold or scared, until the inguinal rings close at about 6 months. At that time, a dog with one descended testicle is termed a unilateral cryptorchid, and with no descended testicles a bilateral cryptorchid. Monorchid refers to the very rare case of a dog that only develops one testicle, although it's often misused to mean a dog with one undescended testicle.

The reported incidence of cryptorchidism ranges from 1 to 10 percent in dogs, with many more almost certainly unreported. Unilateral cryptorchids occur more often than bilateral, and the retained testicle is usually the one on the dog's right side. It's reported most often in small or short-nosed breeds, including Pekingese, Cairn Terriers, Toy Poodles, Pomeranians, Yorkshire Terriers, Bulldogs, Miniature Dachshunds, Maltese, and Boxers.

Hereditary factors are assumed to play an important role. Certain inbred families of dogs, notably Miniature Schnauzers and Cocker Spaniels, have increased rates of cryptorchidism. Some of the most telling data come from selective breeding in goats. Deliberate use of cryptorchid sires raised the incidence in a goat herd from 7 to 51 percent; then in that same herd strict selection against cryptorchids (using only entire sires, and using neither a parent of a cryptorchid nor offspring of a known carrier) decreased the incidence to 1 percent.

The genetics aren't known, although it's commonly speculated that the trait is a sex-limited (can only be seen in males) autosomal (non-sex chromosome) recessive (takes two) trait, meaning that both males and females can be carriers. That means that if a breeder seriously wants to rid the trait from a line, then not only affected males, but sisters, mothers, and dams of affected males must be pulled from the breeding pool. This would create such a devastating blow to most gene pools that it's not reasonable. Another possibility is that cryptorchidism is a polygenic trait, i.e., arising from the interplay of multiple genes. This would make it even more difficult to control.

Cryptorchid dogs can't be shown in conformation, and bilaterally cryptorchid dogs are sterile. A retained testicle is about 10 times more likely to become cancerous, and its spermatic cord is more likely to cause testicular torsion (from twisting). Though still a fairly low risk, a retained testicle should usually be surgically removed.