

## HC-HSF4 - Hereditary Cataracts

### Details about the disease



A cataract is an “opacity”, or loss of transparency of the lens of the eye. The opacity may be confined to a small area of the lens, or it may affect the whole structure. A complete cataract affecting both eyes will result in blindness, whereas small non-progressive cataracts will not interfere with vision. Primary cataracts occur in some breeds; in other breeds the cataract may develop secondarily to another

inherited disorder such as progressive retinal atrophy or glaucoma.

### Clinical signs

Obvious cataracts occur between 9 and 15 months of age with further progression and maturity of the cataract between 2-4 years. This is a blinding condition if left untreated.

### How it is inherited

A number of breeds are known to suffer from HC and there are almost certainly different genetic causes for a number of these. Mutations in one gene called HSF4, has been shown to cause HC in a number of different breeds (Australian Shepherd, Boston Terrier, French Bulldog and Staffordshire Bull Terrier). One of the HSF4 mutations causes bilateral cataracts, in Staffordshire Bull Terriers, Boston Terriers and French Bulldogs, that can be diagnosed as early as 8-12 weeks of age, but are not congenital.

In these breeds the mutation in HSF4 is an autosomal recessive condition. This means that a dog must inherit two copies of an abnormal gene (one from its mother and one from its father) before its health is affected. A dog that inherits only one copy of the abnormal gene (from its mother or its father) will have no signs of the disease, but will be a carrier and may pass the gene on to any offspring.

For advice on breeding your dog for health, visit The Kennel Club information guide [www.thekennelclub.org.uk/media/451962/breeding\\_health.pdf](http://www.thekennelclub.org.uk/media/451962/breeding_health.pdf)

