

Belgian Shepherd Dog - Groenendael	
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Ocular disorders known or presumed to be inherited (published)

	Diagnosis	Description and comments specific to the breed	Inheritance	Gene/ marker test	References
A	Chronic superficial keratitis (CSK)		Unknown	NO	1
B	Lympho-plasmocytic inflammation of the external surface of the nictitans membrane (Plasmoma)	-seen alone or together with A.	Unknown	NO	1
C	Cataract	1. posterior suture line opacities (1 family of dogs) 2. nuclear fibrillar opacities, dogs >7 y.o. significance not known	Unknown	NO	1

D	Retinal dysplasia-multifocal	Congenital multiple folds, linear or Y shaped, generally in tapetal area, many disappear when animal matures	Presumed autosomal recessive	NO	1
E	Progressive Retinal Atrophy (PRA)	-Degenerative disease of the retinal visual cells leading to blindness - Limited breeding studies in the Groenendael	Presumed autosomal recessive	NO	1,3
F	Retinopathy in pups (1 closely inbred family)	-Pups blind at 8 weeks -disturbed vision in bright and dim light -multifocal round oval areas of retinal thickening in tapetal area -inner photoreceptors and retinal pigment epithelial cells affected	Presumed autosomal recessive	NO	1,2
G	Achiasmic optic nerves with nystagmus	- described in one small family - congenital nystagmus is frequently noted - no chiasmal decussation of the retinal ganglion cell axons	Autosomal recessive	NO	4

The ECVO's advice relating to hereditary eye disease control

Please see ECVO Manual chapter 8: VET Advice

Recommendations regarding age and frequency for eye examinations

Please see ECVO Manual chapter 7: ECVO Age and Frequency recommendations

Other ocular disorders (reported)

	Diagnosis	Source
A	Corneal dystrophy	ACVO genetics committee
B	Persistent pupillary membranes	ACVO genetics committee
C	Micropapilla	ACVO genetics committee

Note: The Groenendael, Laekenois, Malinois and Tervuren are considered closely interrelated and not genetically indistinct.

References

1. Rubin LF, Inherited eye diseases in purebred dogs. Baltimore, Williams & Wilkins, 1989, 35-37
2. Wolf ED, Samuelson D, Retinopathy in a family of Belgian Shepherds, Proc.Am.Col.Vet. Ophthalmologists,12: Supplement,1981.
3. Miller TR, et al: Generalized retinopathy in the Belgian sheepdog. Invest Ophthalmol Vis Sci 27(Suppl): 310, 1986.
4. Hogan D, Williams RW: Analysis of the retinas and optic nerves of achiasmic Belgian sheepdog. J Comp Neurol 52(3):367-380, 1995