

The Dalmatian Club of America Iris Sphincter Dysplasia - Part II

Symptoms, Protocol & Procedure

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What should make us suspicious of our Dalmatian having ISD?

Typical Indicators of Possible Iris Sphincter Dysplasia ("ISD")

The mere observation of just one of the following is sufficient to prompt us to visit the ophthalmologist:

- Squinting when exposed to bright light
- Abnormal dilated pupils or not responsive pupils (pupils that don't respond adjusting themselves to different light situations, e.g.: dark abrupt changes)
- Difficulties to see at night or with poor light (could be a consequence of ISD or another problem)
- Partial or total blindness (could be a consequence of ISD or another problem)
- Cataracts (could be a consequence of ISD or another problem)
- Hard time adjusting to house light after coming in from bright sun/passing suddenly from a shaded area into one of bright light.
- Pupil remains dilated all the time
- Oddly shaped irides (oval shaped when not dilated)

Note that as far as we know based on a few owners' reports and studies started years back, it is not an age-specific problem, and even puppies can show different degrees of affection. Among littermates, they can even start showing it at different ages yet as puppies or even at adulthood.

Inherited or primary ocular disease may be present as a congenital defect or may develop clinically in adolescence or later in life.

Is there anything more we should do?

Yes, in fact following our ISD recommended Protocol would be of great benefit.

ISD Recommended Protocol

Breeding Stock & Litters

Stud Dog Test: Test males and females for ISD before mating. Why?

- ISD seems not to be age- specific
- We have strong evidence of ISD being a heritable condition
- All information gathered will help further studying the condition and help us designing guidelines to successfully cope with ISD.

A standard CERF exam before breeding is also recommended.

Litter Test: from 6 to 8 weeks of age.

All puppies (show and pet quality) should be tested for ISD before leaving to their new homes, between the ages of 6 to 8 weeks. The exam is simple (using a transilluminate or a penlight), does not require dilated pupils and does not pose pain or a too stressful situation. Any AVCO ophthalmologist prepared to test for ISD should be able to perform this first exam filling in the corresponding forms.

Why testing at 6 to 8 weeks?

- ISD has been reported as early as this age
- It would provide a baseline exam important to breeders, new owners and to the Eye Study Group
- If the trait follows a recessive pattern of inheritance as previous researchers suspected, carriers would not show signs of the condition whilst eventually passing it to future generations

At 1 year old:

A standard CERF exam should be done.

Adult Dogs

We suggest Testing between 1 - 2 years old and then once more at middle age between 7-8 years old. Reports seem to show that certain dogs that were asymptomatic when young developed the condition later in life. Till more is known, we could certainly be favored following this recommendation. The information forwarded would aid in the research and will hopefully provide us with sufficient knowledge to either eliminate the threat or keep it within control. Early detection could perhaps help preventing further deteriorating consequences, (something that should be determined with future studies).

Why is it so important for all Dalmatian people to cooperate?

Because we can't base our future guidelines and studies on just a few cases, we need to have a significant number of reports so as to be considered representative of the whole Dalmatian population and be statistically valid.

What should we expect when taking our dogs to an ophthalmic exam?

Prior to any eye dilatation:

- Exam from a distance: checking vision, mental status, globe and orbital symmetry, symmetry to the various accessory structures associated with the eye bulbus; symmetry to facial structures, blink characteristics, ocular motility. Dilated pupils can be confused by excitement, since a stressed dog might not have normal constriction.
- Pen-light or Transilluminator Exam : To test pupillary light reflexes in order to determine if the retina and all nerves are functioning normally.

ISD condition is first noticed during this initial part of an eye exam, note that it needs to be performed before adding dilating drops to the eyes.

If ISD has been found, checking for the presence of cataracts as well as for any degree of retinal degeneration is also strongly advised.

If during a routine CERF exam, the non-dilated part of exam is not performed, some other steps requiring dilated pupils might be eliminated. CERF has a place on the form reserved for new abnormalities and would check for ISD if specifically asked to. This should be done before the ophthalmologist starts his usual procedures, and before dilating pupils with any eye drops.

The ophthalmologist will decide how to further proceed, performing one or more tests according to what the previous examinations and his observations have revealed. After testing ocular discharges, examination of accessory structures of the eye and finally the eye itself would follow. The ophthalmologist would add eye drops to dilate pupils and will ask the patient to wait till the drops have made effect before continuing with the procedure.

Once pupils are dilated a routine procedure examines:

To examine accessory structures of the eye, the ophthalmologist usually uses either an otoscope or a slit-lamp biomicroscope (the latter is better). Next would be an exam of the cornea; followed by the anterior chamber and anterior uvea (using an ophthalmoscope). The iris is checked during this part of the exam. Next could come measuring the pressure within the eye and evaluating the drainage angle (to out-rule or confirm glaucoma). Finally the exam would end with a fundus exam (lens, vitreous and retina).

According to his findings, the ophthalmologist might suggest performing an electroretinogram, (ERG), and or an ultrasound retinography to asses the retinal response in very specific cases.