

Horner Syndrome

What is Horner Syndrome?

What's up with my pet's eye? If you notice your pet suddenly has a "lazy eye," it may be Horner Syndrome—a specific group of clinical signs, which indicates dysfunction of the sympathetic fibers to the eye. Signs of Horner Syndrome include:

- A drooping eyelid ("ptosis")
- A small pupil ("miosis")
- A sunken eyeball ("enophthalmos")
- Elevated third eyelid

Horner Syndrome is not painful and does not affect a patient's vision. In most cases, only one eye is affected, but occasionally both eyes will show signs. Both dogs and cats can be affected by Horner Syndrome, although it is more common in dogs. Any breed can be affected, but certain breeds including Golden Retrievers and Labradors are over-represented.



What causes Horner Syndrome?

Horner Syndrome indicates dysfunction of the sympathetic fibers to the eye. The sympathetic fibers are part of the autonomic nervous system, and these fibers contribute to an animal's "fight or flight" response by allowing the pupil to dilate in response to stimuli.

Anything that disrupts the sympathetic pathway from the brain to the eye can result in Horner Syndrome. There are many causes of Horner Syndrome, but some more common causes include:

- Idiopathic
- Inner ear infection
- Brachial plexus nerve avulsions
- Cervical intervertebral disc disease
- Disease in the thorax and mediastinum (in the chest)
- Systemic/metabolic disease

The most common cause of Horner Syndrome in dogs is idiopathic, meaning no underlying cause is found on any diagnostic tests. Idiopathic Horner Syndrome is self-limiting and does not lead to any other neurological or systemic symptoms. The most common cause of Horner Syndrome in cats is inner ear disease, such as an inner ear infection or a polyp in the middle ear.

What should I do if I suspect my animal has Horner Syndrome?

The first step in looking for an underlying cause of Horner Syndrome is a good thorough physical, ocular, and neurological exam. This helps to rule out systemic disease, ensure there is no primary eye disease, and screen for other neurological deficits. Isolated Horner Syndrome with no other abnormalities on physical/neurologic exam significantly increases the likelihood of idiopathic disease.¹

After a thorough exam, your veterinarian may recommend further diagnostic testing to screen for underlying causes of Horner syndrome. This may include:

- An ear exam with an otoscope, ear cytology +/- culture if an inner ear infection is suspected
- Ocular diagnostics to check for a corneal ulcer or other primary eye disease
- Systemic bloodwork to screen for metabolic disease
- Thoracic radiographs (x-rays) to evaluate for potential disease in the chest
- Further neurologic diagnostics such as brain or cervical MRI with a veterinary neurologist

How is Horner Syndrome treated?

There is usually no specific treatment needed for Horner Syndrome itself. Instead, treatment is focused on addressing any potential underlying conditions. In cases of suspected Idiopathic Horner Syndrome, when physical exam and diagnostic tests are all normal, no treatment is needed.

After the underlying cause is treated, Horner Syndrome may resolve, or some signs may be permanent. However, this is largely cosmetic and does not cause any long-term consequences to your pet's health or vision.

References

Lockhart RL, Tzouganakis I, Tsvetanova A, Smith KM, Smith PM. The diagnostic yield of advanced imaging in dogs with Horner's syndrome presenting with and without additional clinical signs: A retrospective study of 120 cases (2000–2018). *Vet Ophthalmol.* 2022 May;25 Suppl 1:51–59. doi: 10.1111/vop.12918. Epub 2021 Jul 7. PMID: 34235839.

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