

Horner's Syndrome in Dogs

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What is Horner's Syndrome, and what causes it?

Horner's Syndrome is a group of signs that occurs when specific muscles of the face lose their stimulation by certain nerves, specifically the sympathetic nerves. It is caused by some type of injury to, or lesion of, the nerves. The injury may occur at the level of the brain, upper spinal cord, or between the spinal cord and the face. In the dog, the most common causes are:

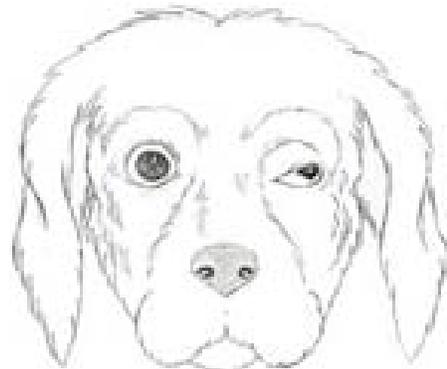
- Idiopathic (cause unknown)
- Car accidents with trauma to the head, neck, or chest
- Bite wounds
- Intervertebral (IV) disc disease in the neck area
- Infections of the middle ear
- Disease of the orbit (area behind the eye)
- Cancer involving the brain or chest
- As a result of a treatment (e.g.; ear cleaning) or medication

For an unknown reason, Horner's Syndrome appears to be more common in Golden Retrievers. Approximately 40-50% of the cases of Horner's Syndrome in dogs are idiopathic.

What are the signs of Horner's Syndrome?

The classic signs of Horner's Syndrome occur on the same side of the face as the injury, and include:

1. Small pupil size (miosis)
2. Protrusion of the third eyelid
3. Drooping of the upper eyelid (ptosis)
4. Sunken appearance to the eye (enophthalmos)
5. Dilation of blood vessels on affected side of the face, which makes the area feel warmer to the touch



How is Horner's Syndrome diagnosed?

Horner's Syndrome is diagnosed by the presence of the signs listed above. What is more difficult, is the diagnosis of the cause of the condition. A complete physical and neurologic exam, [radiographs \(x-rays\)](#), a [chemistry panel](#), [complete blood count \(CBC\)](#), and perhaps a [CAT scan](#) or [MRI](#) will help determine the cause. Epinephrine may be administered to the eye to assist in locating the site of the injury by measuring the time between administration and dilation of the pupil. When the injury to the nerves occurs outside of the brain and spinal cord, the epinephrine will cause the pupil to dilate within 20 minutes of administration. If the lesion is in the brain or spinal cord, pupil dilation generally does not occur until 30 or 40 minutes after the epinephrine is administered.

How is Horner's Syndrome treated?

Depending upon the location of the injury, phenylephrine eye drops are administered to relieve the clinical signs. The underlying cause such as a bite wound or middle ear infection should be treated. In cases of idiopathic Horner's Syndrome, the condition often resolves after 6-8 weeks. Horner's Syndrome caused by injuries to nerves outside of the brain and spinal cord generally have a better prognosis.