The Equine Eye

Eye

- The horse has a very large eyeball that magnifies everything much larger than we perceive it. This enables the horse to see distant objects in clearer detail than humans. Because the horse is a prey animal the horse must be on constant lookout for predators long before they get within striking range.

- Sensory hairs around your horse's eyes trigger the "blink reflex" if they get too close to any objects. When you're grooming, even for shows, avoid trimming these hairs shorter than an inch.

- Corpora nigra (pronounced NYE-grah) bodies are those generally dark round shapes along the inside edge of each pupil. Some suggest that these serve as a built-in visor, shielding interior eye structures from excess glare.

- The third eyelid is a lightning-fast flap that zips across from the inner corner to seal the eye shut against threat even before the lids can close.

Vision

- Because the eyes are placed on the sides of their head, horses can see nearly a 360 degree radius. Horses have a much wider field of vision than humans.

- Horses have a small blind spot in front of their muzzle and directly behind the tail.
• Horses see most things with one eye. This is why they may spook at something that they have already walked past and reacted to once: They are seeing it for the first time--with their other eye.

• The horse can bring things into focus two ways:
  o Using tiny muscles to change the shape of the eye's lens like a human
  o Changing their head position to direct the image to a different part of their eye. The horse raises its head to focus on far-away objects (and may turn it slightly at the same time to bring one eye to bear) and lowers it to see closer objects.

• Horses have better night vision than humans.

• Horses have a different view of color than humans. For horses, red, orange, yellow and green may appear the same. They seem to do fine with this limited color vision and probably use other visual cues to function in their environment. Click here to read a review of what horses and humans see. What Horses and Humans See: A comparative Review

Trauma

• Because of the placement of their eyes and the flight response, horses are prone to eye injury.

• Horses may experience lacerations of the eyelid and damage to the cornea and to the eye globe itself.

• Call your vet for a same day evaluation if:
  o The horses is holding the eye shut
  o The cornea (surface of the eye) appears cloudy
  o The horse is squinting with drainage coming from the eye
  o The eyelid has a snag or tear
  o There has been any blunt trauma to the eye.

Problems Associated with the Equine Eye

• **Plugged Naso-lacrimal Duct** - Like humans, horses have a duct that runs from their eye to their nose. Excess tears are drained through this duct. The duct may become plugged due to dust, dirt or a foreign body. Horses with a plugged naso-lacrimal duct will have tears spill over onto their face below the eye.
• **Uveitis** - Inflammation of this portion of the eye will result in sensitivity to light, pain, or squinting, cloudiness of the eye, small pupil and redness of the eye.

• **Neoplasia** – 10 percent of tumors in the horse may affect the eye or eyelids, including the third eyelid. Consult with your veterinarian regarding any abnormal “growths” in or around the horse’s eye.

• **Cataracts** - Horses may have congenital (present since birth) or acquired cataracts due to uveitis or trauma.

• **Glaucoma** - Like humans, this is a disorder of fluid outflow that results in increased pressure within the eye. In horses it is often associated with uveitis.

• **Blindness** - May be caused by recurrent uveitis, corneal disease, trauma, neoplasia, or infection. Blind horses can be managed with consideration to the temperament of the horse, dedication of the owner, and ability to provide a safe environment. The onset is often gradual with progressive uncertainty, especially in low light. Horses that are slowly going blind may demonstrate unpredictable behavior.

**Final Comments**

• Injuries to the eye should be seen by a veterinarian.

• Applying medication without an examination or neglect of a painful eye can cause very serious complications, including vision loss.

• Common conditions of the eye in horses include corneal ulcers, eyelid lacerations, uveitis, neoplasia, cataracts, and glaucoma – these can all be addressed and treated if caught early.

• A painful or traumatized eye is an emergency!

**References**


