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Five Common Equine Eye Injuries

Equine ocular insults are painful and sometimes unsightly, but with proper diagnosis and treatment most heal remarkably well

Did you know the horse has the largest eyeball of any land mammal? Did you know his eye magnifies everything he sees 50% larger than our eyes do? Or, that he can see almost 360 degrees around him?

"The horse's eye is a beautiful structure that tells us so much about them," says Rachel Bourne, DVM, a practitioner at Wisconsin Equine Clinic & Hospital, in Oconomowoc. "By looking at the eye, we can often tell how the horse is feeling, what they are thinking, and more. The eye really is a window into the horse's soul."

A horse's eye is one of his most functional and aesthetically pleasing features, so when an eye injury occurs, it can be unsettling for both him and his owner. In this article, Bourne, who has a passion for equine ophthalmology, will outline the top five eye injuries she sees in her practice, as well as what to expect for treatment and recovery.

1. Corneal Ulcers

These are the most common eye emergencies Bourne sees in her practice. A corneal ulcer is basically a scratch to the surface of the eye caused by trauma. Bourne says a horse can sustain these scratches when getting poked in the eye by a piece of grass, hay, or a twig and/or rubbing his eye on something.

Clinical signs "Classically, owners will see a sudden onset of tearing and/or squinting," Bourne says. "The horse might even have his eye totally shut and be sensitive to touch and light. A corneal ulcer feels like when we get an eyelash in our eye or something stuck under our contact. It is an uncomfortable pain accompanied by excessive tearing and a strong urge to keep the eye shut."



Eyes with corneal ulcers are uncomfortable and typically sensitive to touch and light.

Photo: Courtesy Rachel Bourne, DVM

What to do Because the horse is experiencing pain and discomfort, it is often difficult for owners to distinguish the extent of the scratch or what the injury even is in the first place. Bourne says that's why it's important to call your veterinarian and give him or her a detailed description of the clinical signs you can see and ask for his or her professional opinion about diagnosis and treatment.

She says simple corneal ulcers are typically easy to treat and heal if caught promptly, but if they go undiagnosed or misdiagnosed for a long period of time, they can lead to more serious problems, such as bacterial and/or fungal infections. To help keep the horse comfortable until the veterinarian arrives, bring him inside or put a fly mask on him to keep sunlight, dirt, and insects off the ulcerated eye. If the horse will allow it, she says the veterinarian might also suggest applying a cold compress to provide pain relief.

Diagnosis Bourne says most horses need to be sedated so the veterinarian can get a better look at the eye. Veterinarians might also choose to perform nerve blocks around the eye to counteract the horse's instinct to hold it tightly shut. She says that occasionally you can see obvious signs of an ulcer (e.g., cloudy spots) or, in severe cases, a gouge to the surface of the eye. But most of the time a veterinarian must apply a fluorescein stain that adheres to the surface of the eye beneath defects, so they can see them and make a definitive diagnosis.

Treatment Practitioners usually apply topical antibiotics to the eye to prevent infection, accompanied by non-steroidal anti-inflammatories such as phenylbutazone (Bute) or flunixin meglumine (Banamine) to control the pain. Do not administer steroids to reduce the inflammation, as these can actually worsen the disease, delay healing, or possibly lead to infection, cautions Ann Dwyer, DVM, of Genesee Valley Equine Clinic, in Scottsville, New York.

Bourne says veterinarians might also prescribe a dilating agent if the iris is spasming as a pain response, which is painful in and of itself. To speed healing many veterinarians administer topical autogenous serum—derived from the horse itself—to reduce tear film and corneal protease activity (enzymes breaking proteins down into amino acids). A fly mask can be a very useful tool to protect the eye from bright light and debris while it heals.

Recovery "If the ulcer is minor, the horse is typically much better within 24 hours of starting treatment," Bourne says. "Most corneal ulcers in an otherwise healthy horse will heal completely in three to seven days. However, if the ulcer has been going untreated or mistreated for several days or longer, the recovery and treatment period can be much more complicated."

2. Foreign Body Injuries

Anything that is not supposed to be in or around the globe falls into this category. This could be hay, grass, wood, thorns, burrs, seeds, etc. "The most common foreign bodies I see in the Northeast are burdock pappus bristles," says Dwyer.

The foreign body can be floating across the eyeball, embedded in the lids or along the sides of the eye, or in a worst case scenario, it impales the eye itself. It is very common for a foreign body to cause a corneal ulcer.

Clinical signs Most of the time you will not be able to see an ocular foreign body because of the excessive tearing and swelling. If the foreign body has impaled the eye, Bourne says you might be able to see it, but you should not remove it. She says removing the foreign body improperly can cause the structure of the eye to collapse, which is very serious and might result in eye loss.

What to do Because the clinical signs for many of the injuries we discuss in this article are the same (tearing, swelling, pain, etc.), it's important to have a professional diagnose the horse. In the case of a foreign body, especially if you can see the object, remain calm and keep the horse calm. Bourne says it also is important to keep the horse from rubbing his eye, which can damage it further.

Diagnosis Similar to corneal ulcer treatment, veterinarians often sedate the horse and use nerve blocks around the eye so they can properly assess and locate the foreign body.

Treatment For minor foreign body injuries, usually removing the irritant is the only necessary step, Bourne says. If the object has caused a corneal ulcer, the veterinarian will need to treat it as outlined above. Depending on the severity of trauma, veterinarians might also prescribe topical and/or systemic antibiotics and routine flushing of the eye. If the foreign body has impaled the eyeball, the horse typically requires surgery, and postoperative care becomes much more extensive.

Recovery Time to healing varies greatly, depending on both the object's location and the injury's severity. For minor foreign bodies that have not caused any auxiliary damage (an ulcer, for instance) signs of recovery might be apparent the instant you remove the object. For more complicated cases, such as those requiring surgery, the recovery period can be as long as several months.

3. Eyelid Lacerations

Both the upper and lower eyelid can sustain lacerations, or tears. Bourne says horses like to rub their heads on objects around them, including bucket handles, stall walls, and fences, which sometimes have sharp edges that can easily tear eyelids.

"These injuries almost always are the result of the eyelid getting trapped in something like a bucket handle, then the horse pulls back and rips the tissue," Dwyer says.



If an eyelid laceration needs suturing, the veterinarian should ideally do so within four to six hours.

Photo: Courtesy Dr. Diane Hendrix/AAEP Proceedings

Clinical signs "An eyelid laceration is much easier for the owner to identify than a corneal ulcer or foreign body," Bourne says. "Owners will typically see an obvious defect of the upper or lower eyelid, accompanied by blood, pain, and/or swelling."

What to do Even if the tear is old or small, still call your veterinarian. Bourne says eyelid lacerations typically heal very well, even if they are not found immediately, because there is a great amount of blood flow in the horse's head. But a laceration in the eyelid margin can create an area of the cornea that is no longer covered if not properly stitched. In such a case, the horse will not be able to protect that area of his eye when he blinks, resulting in long-term damage and problems, so it is important to have your veterinarian assess the wound and treat accordingly. Also check the globe itself for damage, says Dwyer.

Diagnosis Most veterinarians sedate the horse, clean the wound, and then determine whether sutures are needed.

Treatment Ideally, a veterinarian should suture any laceration within four to six hours, says Bourne. Suturing requires precise alignment and the use of very thin sutures—it is essentially plastic surgery to repair an eyelid," says Dwyer. "Owners can help by providing a well-lit space and a stack of shavings bales or other prop that can be used as a table to support the horse's head during the repair," she adds.

After suturing, most horses receive topical and systemic antibiotics to prevent infection and non-steroidal anti-inflammatories for pain. Bourne also recommends using a fly mask to keep the wound clean and avoid insect irritation during healing.

Recovery Bourne says most uncomplicated lacerations heal well in 10 to 14 days and leave minimal scarring.

4. Orbital Fractures

These fractures to the bone surrounding the eye are caused by trauma, such as a kick by another horse.

Clinical signs Typically owners see a lot of swelling, possibly accompanied by a laceration.

What to do Remove the horse from the herd, and keep him calm and quiet until your veterinarian can arrive and assess the damage. If there is a laceration as well, a fly mask might help protect the wound and keep it clean.

Diagnosis Most orbital fractures require some kind of advanced imaging, such as radiography, ultrasound, and/or computed tomography for diagnosis.

Treatment "If the fracture is simple (and nondisplaced), we might just treat with anti-inflammatory pain medication," Bourne says. "If the fracture is more complex ... surgery is often required to plate the complex or displaced fracture. The function of the orbit is to protect the eye, so if a fracture occurs to the structure, our goal is to repair it as close to its normal shape as possible, for both functional and aesthetic reasons."

Recovery Bourne says you have to assume any fracture will take four to six months to heal completely. Your veterinarian can give you the best estimate for the horse's necessary recovery period; depending on severity, she says, the horse can typically ease back into work once the pain and swelling subsides.

5. Unknown/Other

Because so many eye injuries cause the same clinical signs, most owners cannot distinguish the difference between an allergic reaction, bee sting, acute uveitis (inflammation in the eye) flare-up, hyphema (hemorrhage within the anterior—or front—chamber of the eye), corneal ulcer, foreign body, etc. Bourne advises owners take caution and call their veterinarian anytime they see an eye problem in their horses.

"The eye is one of the most beautiful (and functional!) assets of the horse's body, and it should be maintained and protected accordingly," she says.