

Eye Injuries 101

Part II of a series on equine eye care.

by Tracy Williams

It begins like any other morning: you slug back a cup of coffee, then quickly dash to the barn for a morning feeding before rushing to the office. However, normal rush rapidly shifts to panic when you are confronted by your horse's half-closed eye, dripping with fluid and gunk. A closer inspection reveals a tiny gray spot amid the fluid and cloudiness. Although it may not seem like a serious wound, don't be fooled; every eye injury has the potential to blind your horse. Whether it is your pasture pony or competitive champion, immediate action needs to be taken, or your horse could lose his sight.

In this accident-prone species, eye injuries are a common problem; horses can poke their eyes with everything from broken fence shards to thorns to a stalky piece of hay. Whatever the cause, eye injuries require immediate attention because they can rapidly deteriorate; waiting even a few hours can compromise healing and future vision. If your horse's eye is swollen, awash with tears and discharge, reddened, or has a white/blue tinge to the cornea, seek help immediately.

The Anatomy of a Wound

The eyeball is covered with a transparent sheet of tissue called the cornea, which has several layers. The outer thin lining of epithelium acts as a protective barrier for the sensitive inner eye tissues. If this outer layer is breached, the barrier is destroyed, and the inner layers may become damaged as well. Eye wounds are relatively small, and anywhere else on the body they would probably heal without issue. But on the eye, they become complicated.

A normal equine eye has a wide range of bacteria and fungi living on its surface; it is not a sterile organ. Any one of these populations could infect the wound, potentially robbing your horse of his vision and future career. This risk of infection warrants timely treatment; generally, the "golden period" is six hours after injury. Although all is not lost beyond this point, this window gives you the best chance of full recovery. Prognosis for these injuries is dependent on the degree of damage and contamination but also how quickly the wound is caught and how aggressively it is treated.

Initial Response

Your first step when you discover an eye injury is to call your veterinarian;

the longer you wait the higher the risk of infection and permanent vision loss. Next, move your horse to a stall. A darkened stall protects your horse from painful sunlight, bugs and wind-blown contaminants affecting the sensitive eye wound. Make sure the stall is clean, and try to avoid dusty bedding or feed stuffs to keep the eye as clean as possible. Until the veterinarian arrives, stay with your horse; if he rubs his painful eye he could irritate the wound and create irreversible damage.

Initial Treatment

When your veterinarian arrives, he or she will probably flush the wounded eye with saline to cleanse it and apply Fluorescein, an orange stain that attaches to abraded tissue and dyes it fluorescent green, revealing the extent of the injury. Unfortunately, the stain is only effective with injuries less than 24 hours old because it only attaches to fresh abraded tissue. The primary goals in treating eye injuries are preventing infection, reducing inflammation and keeping the pupil dilated. To accomplish these aims, your veterinarian will probably prescribe several topical solutions.

Triple antibiotic

With all the bacteria and fungi living on the eye's surface, your primary goal is guarding against an infection. Therefore, a triple antibiotic is vital and often needs to be applied every two hours for at least the first 24 hours, and treatment may continue at a reduced rate for weeks. An anti-fungal is also an option, especially in hot, humid climates where fungi thrive.

Blood serum

When the body is wounded, it reacts by sending in a team of white blood cells; these cells produce enzymes called collagenases that can destroy eye tissues and worsen the ulcer. Bacteria and fungi infecting the wound can also produce destructive enzymes – blood serum intervenes. Blood contains globulins that act as anti-collagenases – they counteract the enzymes to protect and soothe the eye. Once your veterinarian draws a few vials of your horse's blood, place them in the refrigerator until the golden serum rises to the surface. At treatment time, draw a little into a syringe and apply it on the eyeball before other medications – or according to your veterinarian's recommendations.

Atropine Ophthalmic

Atropine accomplishes the next goal of treatment – dilation of the pupil. In eye injuries, often the pupil can shrink, preventing vision, and in some cases, it won't dilate again after healing. Thus, keeping the pupil dilated is vital to future sight. In addition, atropine also strengthens the blood vessels growing into the wound, preventing them from leaking protein.

Flunixin Meglumine

Flunixin meglumine, better known as Banamine, is an anti-inflammatory, which you will generally administer every 12 hours to alleviate pain and swelling. Consider giving it orally instead of intramuscularly if you will be giving it for an extended period of time. This method is just as effective, and it will prevent muscle damage as well as keep you from having to give your horse shots twice a day for an extended period.

Photo by Tracy Williams

After 24 to 48 hours, you should begin to see improvements in the injury, but continue to apply medications as directed by your veterinarian. You should start to see improvements within 24 to 48 hours; swelling should go down, and your horse should start to hold his eye open. Even with evident improvement, diligently apply medications because eye injuries can rapidly deteriorate and often take extensive time to fully heal. If the injury worsens over time, contact your veterinarian immediately for more aggressive treatment options.

An Ounce of Prevention

Photo by Diane Cromartie Horses are ingenious at finding trouble, so they don't need any help from you. You can prevent many injuries by just following some simple guidelines.

1. Comb your barn, pastures and fences for rough, sharp or broken objects and eliminate them.
2. Consider feeding hay at ground level to keep dust in the eyes at a minimum.
3. Keep flysprays and other products away from the eyes at all times.
4. Use flymasks.
5. And, above all, make sure you are examining your horse's eyes daily for signs of trauma. Even in an immaculate barn, a horse can find a way to injure himself.

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