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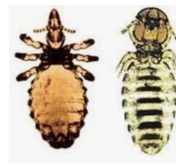
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OPHTHALMOLOGY



LICE

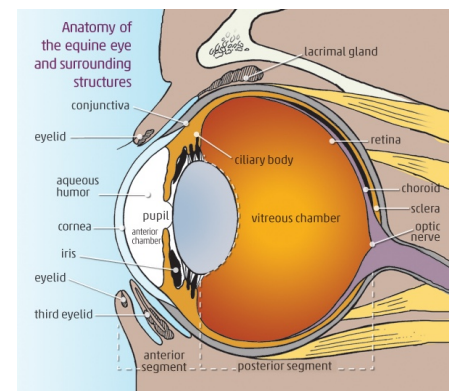


NUTRITION

EQUINE FALL NEWSLETTER

Ophthalmology

Equine eye issues are very common and should be evaluated by a veterinarian as soon as possible. Early signs of ocular irritation or discomfort include excessive tearing, squinting, inflammation, irregular color or shape to the surface of the eye, discharge, or perceived difficulty seeing. Horses with painful eyes often have upper eyelashes that point downwards. Evaluating vision and the integrity of the eye is very difficult without proper equipment, so it is important to call your veterinarian as soon as your horse starts displaying signs of eye discomfort.



Your veterinarian will do a thorough eye exam to diagnose your horse's condition. Most of the time, light sedation is given so that the horse relaxes and a thorough exam can be performed. Nerve blocks may be used, which desensitize the eye to touch and prevent eyelid movement. Horses, like other flight animals, do not like things moving towards their eye and will blink or move excessively when light or movement approaches. Nerve blocks decrease motion and sensation to the eye which allows your veterinarian to do a complete eye exam. An ophthalmoscope uses magnification and a light source to evaluate the retina, pupil size, and other important structures of the eye. A green fluorescein stain is used to determine if there are any abrasions or ulcers in the cornea. Your veterinarian may also use a tonometer, a small hand-held machine that checks intra-ocular pressure. High eye pressures (glaucoma) can lead to blindness and are very painful. A prompt, thorough veterinary exam is important to diagnose your horse's condition, develop an appropriate treatment plan, and provide a prognosis for recovery.

The most common equine eye issues include corneal ulcers and uveitis. A corneal ulcer results from injury or infection to the transparent layer that forms the front of the eye. It is diagnosed

when fluorescein dye adheres to the corneal defect, making the injured area turn green. Most of the time, eyes with corneal ulcers develop a white or cloudy appearance over time. Depending on the duration and severity of the ulcer, they are usually treated with topical antibiotics and systemic anti-inflammatories (like Bute or Banamine). However, complicated ulcers (those that are deeper/larger in size), may require advanced surgical and treatment options.

If corneal ulcers are treated early and aggressively, the prognosis for preservation of vision is very good. However, the longer the owner waits to call the vet, the more damaged the eye becomes.

Uveitis is an inflammation of the middle layer of the eye and is the number one cause of blindness in horses worldwide. It can be caused by bacterial infections, viruses (ie influenza, herpesvirus), trauma, or tumors. Appaloosas, among other breeds, are at a higher risk for developing uveitis. Unfortunately, the inciting cause of uveitis is not always found, and the eye is managed to preserve vision for as long as possible and decrease pain. Your veterinarian may prescribe medications to dilate the pupil (which decreases pain), topical anti-inflammatories and antibiotics if needed, and systemic anti-inflammatories. It is an immune-mediated disease that can be either acute (sudden) or chronic (persisting for a long time). Horses with the acute form initially respond well to treatment, but long-term prognosis can be more guarded because relapse of signs is common. Uveitis and corneal ulceration are frequently seen together.

Other eye problems veterinarians see include cancer, conjunctivitis, and eyelid lacerations (do NOT cut off a lacerated eyelid - we can sew those back!). Getting your veterinarian involved early will give your horse the best possible chance for recovery and preservation of vision. The goals for managing ophthalmology patients are to preserve vision for as long as possible, prevent infection and relapses, and decrease pain.

Lice



Horses are affected by biting or sucking lice. Lice feed off of dead skin cells and blood from their specific host. Lice lay eggs (also called nits) on hair follicles near the skin. Lice are more common during winter and spring when the horse's hair is long and thick. Lice are transmitted by direct contact between horses and via infested brushes, blankets or other tack. The signs of infestation are itching which is especially bad at the base of the tail, mane, and head. This itching can lead to raw patches on the skin from rubbing on fences, walls or other areas. Lice can also cause a horse to have a rough hair coat and be lethargic if the lice ingest enough blood. The treatment for lice is to apply a permethrin based product (spray, dust, wipe on or pour on) to the affected animals. Shampoos or rinses can also be used depending on weather conditions. The equipment and blankets used on the affected horse should also be washed and dried in a dryer on high heat. If the tack can't

be washed it should be sprayed with a permethrin based product. It is also very important to retreat the horse and clean the tack two weeks after the first treatment as the eggs laid by the adult lice will hatch and repopulate on the horse. Contact your veterinarian for recommendations on the best products to use for your situation.

Nutrition

Horses have unique digestive systems that have evolved to be very good at breaking down and collecting nutrients from the bland, forage-based diets horses would consume in the wild. Feed enters the stomach where it is mixed with stomach acid to begin the breakdown of proteins, fats, and simple carbohydrates (sugars). It then travels through the small intestine where the breakdown and absorption of these nutrients is completed, leaving only the hard-to-digest fibers found in mature forages to move into the large intestine. The large intestine of the horse is the largest part of their digestive system, and the part horse owners are most familiar with because when things go wrong in there, the result is colic.

The large intestine has a combination of tubes, pockets, and sacs of various size where fermentation of fiber by healthy gut bacteria takes place. Bacteria break down fiber and release carbohydrate-rich gases as byproducts, which the horse can absorb into their bloodstream. Bacteria get food and horses have access to the nutrients stored in fiber that their own stomach and intestine cannot break down.

When evaluating a horse's diet, there are many factors to consider. A horse's age, breed, body condition, and level of activity, along with housing and weather, tell us how much energy and protein each horse needs. Since some of these factors change throughout the year, it is helpful to provide periodic oversight of nutrition plans.

While many of us are used to assessing a horse's needs based on appetite, activity level, and weight gain or loss, it can be helpful to know that laboratory options exist to aid in the dietary management of equine athletes or horses with certain metabolic conditions. The main staple of a horse's diet is grass or hay. By performing a laboratory analysis on a hay sample from your farm, we are able to see exactly what percent of nutrients are available in each part of the GI tract and more importantly, we are able to calculate how much of a horse's nutritional needs are being met by their hay intake. Next, we can use grain to balance a ration for each horse that meets their specific needs. This can provide great peace of mind to owners faced with managing diets for growing, athletic, metabolic-syndrome, or geriatric horses, as well as for anyone overwhelmed by the increasing number of options available for grains and supplements on the market today. An equine nutritionist or your veterinarian can help anyone interested in balancing equine diets.

