

November 2007



EQUINE VISION

MID-HUDSON VETERINARY PRACTICE, P.C.

How well does my horse see?

This is actually a complex question that has many components to it. Ability to see in low light, ability to detect motion, color vision and ability to resolve fine details are just a few of the things that contribute to a horse's visual ability.

Color Vision:

Veterinary ophthalmologists researched how a horse perceives color by projecting very specific wavelengths of light (specific colors) into the horse's eye. The electrical response of the retina was then measured in response to the stimulus produced by the specific wavelengths or colors. Using this technique it was shown that the horse has two types of cones (humans have 3). Therefore, horses have less of a color vision spectrum than humans. Horses actually lack the ability to see the color red. The color wheels below show the differences between what colors horses can see and what colors we can see.

Human Trichromatic Color Vision

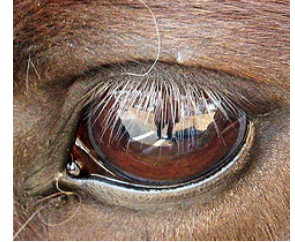
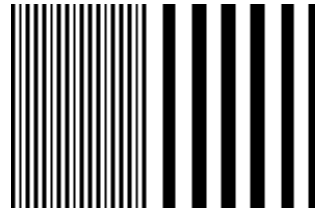


Horse Color Vision



Visual Acuity:

The ability to see fine detail or visually resolve objects seen is known as visual acuity. Visual acuity in horses was determined by researchers by measuring brain activity when horses saw different gratings on a TV screen. By using this procedure it was found that the visual acuity of the horse is approximately 20/60 (humans are 20/20). This means that a human at 60 feet can resolve details that a horse would have to be 20 feet away to tell apart. By way of example, a normal person can tell the lines apart on the left side of the visual acuity chart when they are about 6 feet away. However, at that distance a horse could only tell the lines apart on the right side of the chart. Horses do not have the same visual acuity of people, this may help explain why horses are at times fearful of shadows and sudden movement.

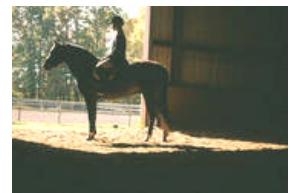


We care for your Equine companions

Mark Jordan, DVM
Matt Elliott, DVM
Jenn Enger, DVM
(845) 225-3100

We are on the web at
MidHudsonVet.Net

394 Route 52
Carmel, New York 10512



If my horse has injured his eye, how will I know?

Eye injuries are always considered potential emergencies and horse owners should be familiar with signs that suggest ocular pain or injury. Remember you should always call our office if there are any concerns regarding your horse's health.

- Swelling of the eyelids may suggest trauma to the surrounding tissue
- Squinting or even partial closure of the affected eye suggests ocular pain
- Any cloudiness or opacity to the normally glassy-like cornea suggests injury
- Redness of the normally pink conjunctival membranes suggests inflammation

A tube or two of ophthalmic antibiotic ointment should be in every horse owner's emergency kit !!

Want a chance to win an equine emergency kit?

Fill out the enclosed entry form for our November 30, 2007 drawing!

