



The Equine Mind: Top 10 Things to Know

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"Why does he do that?" "What is she so scared of ... there's nothing there!" Most—if not all—horse owners have been there and asked those questions. Even though we don't always understand equine behavior, there's got to be a reason behind it, right? Absolutely. Horses' behaviors date back to equine evolution, and horse owners greatly benefit from an understanding what goes on in a horse's brain, according to one veterinarian. At the 2012 Western Veterinary Conference, held Feb. 19-23 in Las Vegas, Nev., Robert Miller, DVM, a former equine practitioner from Thousand Oaks, Calif., relayed the top 10 things horse owners, caretakers, and riders should understand about how the equine mind functions.

"There are 10 genetically predetermined behavioral qualities unique to the horse that have been established by natural selection over the 50 million-year period during which the horse evolved," Miller began. "Failure to understand these qualities makes it impossible to have optimum communication with horses."

1. **Flight**—"We tend to attribute the flightiness of a horse as stupidity," Miller said, but when horses spook and run from things, it's simply their innate instincts kicking in. He explained that unlike the majority of prey animals that depend on horns, tusks, or antlers for defense, the only mechanism horses are armed with—their "life-saving" behavior—is the ability to run. The following nine qualities, Miller said, stem from the horse's flight response.
2. **Perception**—"The horse is the most perceptive of all domestic animals," Miller said, adding that this quality allowed for the quick detection and escape from predators in the wild. He gave examples using the five senses:
 - Smell—Miller said horses have an "excellent" sense of smell.
 - Hearing—"The horse's range of hearing is far beyond that of a human ear," he said. Additionally, he noted, the ears swivel, giving the horse the ability to pinpoint where sounds originate. This was critical for survival in the wild.
 - Touch—"A horse's sense of touch is extremely delicate," Miller said, which is why an ill-placed saddle pad or a single fly can cause

extreme irritation. "The sense we have in our fingertips is what the horse has all over his body."

- Taste—Ever tried to sneak Bute or a new supplement into a horse's feed, only to have him turn up his nose? Horses have a very tactful sense of taste. When grazing in the wild, it's important for horses to differentiate between good grass and moldy forage.
- Sight—The sense that varies most from ours is the horse's eyesight. While horses' depth perception isn't particularly strong, other factors enable them to "see things we're not even aware of," Miller said. The horse's laterally placed eyes allow for nearly 360° vision, a crucial survival mechanism for the wild equid. Additionally, Miller noted the horse has superb night vision and sees in muted, pastel colors during the day. The equine focusing system is also different from humans, he said. When a human eye transitions from focusing on close-up objects to far away objects, it takes one and a half to two seconds to adjust (Miller encouraged attendees to try it—look at something close up and then look at something far away, and try to focus on how long it takes the eyes to focus). Horses, on the other hand, make the transition seamlessly. This is because different parts of the eye have different focusing capabilities. Horses use the top portion of their eyes to see up close, which is why they often lower their heads when investigating something. The lower portion of the eye sees far away, which is why the animal will raise his head when looking at something in the distance; when the horse holds his head up high, he's considered to be in the flight position.

3. **Reaction Time**—Miller said horses might have the fastest reaction time of any domestic animal, which likely results from evolving with flight as their main defense mechanism. To illustrate the concept, Miller showed video clips of Portuguese bull fighting and cutting horses working cattle, in which attendees could clearly visualize that although the bovines made the first move, the horse always countered and arrived at the destination first. While a fast reaction time is quite useful for escaping predators, it can also be dangerous for humans working around horses. "It's important that we, who make our living with horses, expect their reaction time," Miller stressed. "If (a horse) really wants to strike or kick you, you can't get out of the way fast enough."
4. **Desensitization**—Although it's equine nature to be flighty and sometimes timid, Miller said that horses appear to be desensitized faster than any other domestic animal. "If an animal depends on flight to stay alive, and if they couldn't rapidly desensitize to things that aren't really frightening or dangerous, they'd never stop running," he explained. As long as the horse learns the frightening stimulus doesn't actually hurt them, the majority will become desensitized, he said.

5. **Learning**—Miller believes "the horse is the fastest learner of all domestic animals—including children. If you stay alive by running away, you better learn fast."
6. **Memory**—The horse's memory is infallible, Miller said. One of the best memories in the animal kingdom, he noted, horses are second only to the elephant in this department.
7. **Dominance**—Equine dominance is not based on brute strength, Miller explained, which is why humans can become dominant figures in a horse's mind. He related an example of a horse herd in which an older mare is typically the boss. While these mares generally aren't in poor physical condition, they're certainly not the strongest herd member physically.
8. **Movement Control**—What horses do look for in a dominant figure is movement control. Matriarch mares, for instance, assert their dominance by either forcing or inhibiting movement, Miller said, which allows a human to step in as a dominant figure. Miller suggested a quick way for a veterinarian to assert dominance over a horse for safer examinations and treatments: Before treatment, walk the horse in a few small circles. This forces movement and asserts dominance.
9. **Body Language**—Unlike humans, who can express their feelings through words, horses rely on body language, Miller said. "If we are to be competent horse handlers we must be able to understand and mimic the body language of the horse," he explained.
10. **Precocial Birth**—Horses are born in a precocial state, meaning that shortly after birth they possess the ability to move, eat, flee, and follow, and all of their senses and neurologic functions are mature, Miller said. What does this mean for a human? Aside from providing enjoyment in watching a young foal gallop and buck excitedly around a pasture, it tells us that the horse's critical learning period takes place shortly after parturition. Thus, Miller recommends socializing and imprinting foals in the very early stages of life.

Of course, every horse is different and should be treated as an individual. That said, having a basic understanding of *why* a horse functions the way he does provides equestrians with the knowledge needed to forge a strong relationship with the animal and also stay safe when working around him.