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Low-Stress Horse Husbandry

Adopting welfare-friendly handling practices can improve equine well-being and human safety

Natalie DeFee Mendik, MA

s a veterinary behaviorist, Katherine Houpt has seen many cases of undesirable and even dangerous equine antics. Often, however, these behaviors are rooted in anxiety, not animosity. Take the Miniature Horse with a history of rearing and striking at his farrier and veterinarian, for instance. Houpt explained to the owner that the Mini's eyes, ears, and facial expressions displayed fear, not aggression.

"A lot of things that we as veterinarians do

to horses scares them," says Houpt, VMD, PhD, Dipl. ACVB, professor emeritus at Cornell University's College of Veterinary Medicine, in Ithaca, New York. "We need to learn to be aware of the horse's emotions."

From reinforcing behaviors to reading facial expressions, adopting welfare-friendly handling practices can improve equine well-being and human safety. In this article we'll describe how to incorporate these into your horse management routine.

Create Positive Connections

Food rewards can help teach horses to accept potentially unpleasant veterinary procedures, says Houpt. When possible, she says, introduce horses to these procedures in low-stress settings, using positive stimuli, such as:

 Teaching the horse to take oral medications by first practicing with molasses or applesauce in a clean dosing syringe.



Consider incorporating food or physical (e.g., wither scratching) rewards into all your handling, including prep for veterinary exams.

 Teaching the horse to accept injections by pinching a fold of skin on his neck while offering him a treat.

Ideally, owners would introduce their horses to vets, farriers, and other professionals before needing their help, says Camie Heleski, PhD, senior lecturer at the University of Kentucky, in Lexington. "When I have the vet or farrier out for another horse, I'll have them give the young horses a treat or a scratch, so the horse doesn't learn bad things happen when seeing and smelling the vet or farrier."

Heleski encourages incorporating rewards into all your handling techniques, not just vet and farrier procedure prep. "We don't use positive reinforcement (giving the horse a reward for doing what we want or ask him to do) often enough," she says. "Not just 'good boy,' but things that are truly positive for the horse, such as food treats or wither scratching. This does not, however, mean you need to allow 'mugging.'"

Verbal praise might not mean much to the horse, she explains, unless it's been coupled with concrete rewards in the past. Additionally, "working smarter not harder" might pay off when performing tasks that are uncomfortable or annoying for the horse. Heleski suggests owners have hay accessible, for example, when treating scratches or soaking hoof abscesses. "If there's an easy way to do something, and it causes no harm to anyone, then pick the easy way," she says.

Making treatments mundane translates to safer, less stressful experiences. "Most routine veterinary and farrier care is only mildly unpleasant, evidenced by the large number of horses that are indifferent when given an injection or a hoof is trimmed," says Robin Foster, PhD, CAAB, CHBC, research professor at the University of Puget Sound, in Tacoma, Washington. "Reducing the horse's distress—and increasing human safety—requires addressing the source of anxiety immediately and directly using low-stress positive behavior modification training techniques. Vet and farrier visits are infrequent, so training must be set up between appointments. The goal of the training is to change the way the horse feels, so they are relaxed during routine health care procedures."

Houpt points out that it shouldn't matter what training paradigm you're using if you follow the horse's emotional states. "Most of the time horses are trying to give us feedback with the eyes, ears, and facial expression," she says. "It's not magic."

Maintain a Natural State at Home

Key to a horse's well-being is a lifestyle that aligns with his natural behaviors. "One of my colleagues, Lauren Fraser, talks about how if we can give horses the 'three F's' (friends, forage, freedom to move), we'll make big steps toward their welfare status," Heleski says. "It's always my preference to have horses outside as much as possible, depending on what our goals are for the horse and assuming we're not dealing with an injured horse—letting them have some social interaction opportunities and foraging, whether on pasture or hay. In the wild the horse would move around a lot, for hours and hours. So when we pretend that's not their natural ethology (science of animal behavior), it puts the horse in an awkward situation."

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The foraging and social interactions associated with turnout can help reduce or prevent stress in your horse's life.

Even competition horses need time to just be horses. Because researchers have shown that as many as 90% of performance horses have gastric ulcers at some point, we might want to ask ourselves if we can reduce stress—one of the causes of ulcers—through management practices, says Houpt. High levels of the stress hormone cortisol also interfere with the immune system, she adds.

Houpt remind owners that a happy horse is a horse that can graze most of the time. Consider increasing turnout and forage access, which might increase gut motility and decrease colic and gastric ulcer risk. Turnout and exercise can also increase bone density, enhance immune function, and improve overall fitness.

Just as in people, chronic stress can have adverse effects in horses. "A horse's reaction to acute, short-term stressors is adaptive and involves a rapid release of adrenaline and preparation to take action," says Foster. "The horse returns to normal baseline physiology and behavior quickly. In contrast, chronic stress resulting from routine and stressful handling and mismanagement practices can create a negative welfare state.

"Common indicators of negative welfare

status in horses and other animals include stereotypic behaviors (cribbing, weaving, stall running) and signs of chronic stress," she adds. "Signs of chronic stress are often physical or physiological and should be evaluated by an equine veterinarian. They include muscle wasting, impaired liver function, disrupted reproduction, and suppression of the immune system. In horses, diagnosis of gastric ulcers may indicate that the horse is experiencing chronic stress."



Trailering involves many stressful elements; introduce it early in a horse's life, and practice it frequently to make it a nonissue.

Reduce Stress on the Road

Another situation that commonly causes stress is transport, and it doesn't take much imagination to understand why, says Foster.

"Many horses are reluctant to load into a trailer," she says. "Simply entering a dark, narrow, closed box can be challenging, but this is followed by being closed in—often alone for hours—struggling to maintain balance in the moving vehicle and ending up

somewhere unfamiliar where the horse is often asked to work hard.

"Trailering involves many different elements. Consequently, reducing the stress of trailering involves an equal number of strategies. Trailering is most likely to be a routine and mundane nonevent if trailer training begins when the horse is young and is practiced often."

Introducing skills such as trailer loading should ideally begin when a horse is a foal at his dam's side, says Houpt. "The easiest thing is to start early," she says.

Houpt recommends breaking the process down, beginning with control of each step, making sure the horse starts and stops on command. "It's much better to first move one hoof, then (offer) a

treat, two hooves, then treat, and so on than to have to resort to negative reinforcement (rewarding the horse by taking away the unpleasant stimulus—for instance, tapping his rump with a whip until he steps forward)," she notes. "If you later run into problems trailer loading, ... having the horse trot around you can be enough of a deterrent; the horse realizes he gets a break from the work when he moves toward the trailer."

Beyond the stress of loading, traveling with horses away from home for competitions, trail rides, or other events can be nerve-wracking for everyone involved; trigger stacking, which is when multiple stressors take place simultaneously or closely together, can occur with trailering, when other horses are calling and in new environments with foreign sights and sounds.

"Maybe with one thing by itself, the horse would be fine, but as these things build, it's not unusual to see horses explode," says Heleski.

Practicing skills beforehand, introducing one stressor at a time, might ease tension on the big day. She recommends practicing trailer loading on a calm day, going to the showgrounds to school before the competition, or embarking on a trailer ride with a quiet, experienced horse.

The Result? Good Quality of Life

Heleski recommends moving beyond managing and training a horse appropriately to providing him with overall quality of life. She's seen an evolution from simply meeting the horse's basic needs toward a holistic approach to horse care.

This change in outlook, Foster says, is evident in the shift in welfare standard protocols from the 1979 Farm Animal Welfare Council's Five Freedoms model (freedom from hunger and thirst; freedom from discomfort; freedom from pain, injury, or disease; freedom to express normal behavior; and freedom from fear and distress) to the Five Opportunities to Thrive model (Vicino and Miller, 2013; opportunity for a well-balanced diet; opportunity to self-maintain; opportunity for optimal health; opportunity to express species-specific behaviors; and opportunities for choice and control).

"These efforts have gone beyond

The Two-Minute/30-Second Rule

After observing his staff and horse-owning clients struggling with horses over tasks such as administering medications and trailerloading, Doug Thal, DVM, Dipl. ABVP, owner of Thal Equine LLC and creator of Horse Side Vet Guide, began implementing a "two-minute/30-second" guideline to train his staff. If you are trying to accomplish something with the horse for more than two minutes without real progress every 30 seconds, pause and ask yourself:

- Have I successfully managed this situation with this horse before?
- Am I breaking this into the smallest components possible and rewarding each microstep?
- Am I working within safe parameters? If you're trailer-loading, for instance, make sure your horse hasn't backed toward a wire fence or sharp corner. "We can get caught up in pushing toward whatever goal we are pushing toward and, before we know it, we can get out of balance or in dangerous situations," says Thal. "The situation is changing, and you need to be adjusting to that constantly."
- Is there someone I could ask to help who would be skilled at this?
- Could I explain to an observer the steps I am taking to achieve the goal? "In my opinion," says Thal, "handling horses should be a precise and logical thing, and you should know what you are doing and why you are doing it, when you are doing it. If you are forced to describe or articulate something, it indicates awareness and true understanding."
- Is there a method to what I am doing, or am I caught up in the struggle?
- What is another approach I could take to accomplish this task?
- Am I connected with the horse and communicating within each moment?
- Is the approach I am taking in the best interest of the horse? If not, might there be another approach I could take to accomplish this task?

"Things should almost always look easy with horses," says Thal. "You should be able to accomplish your goal quickly, easily, and quietly. Don't blame and label the horse. You have to be honest with yourself. If when handling any horse, you can't make at least some sort of visible progress every 30 seconds or aren't able to explain why there is no visible progress, there is something wrong with your approach. The two-minute/30-second rule should apply to anyone working with a horse, including trainers, farriers, and vets."

compliance and focused more on positive physical and emotional animal welfare and less on minimizing poor welfare conditions," Foster says.

If you were to poll horse owners, however, you would receive a variety of responses regarding what they believe gives their horses good quality of life. "Even with a common set of welfare guidelines, figuring out how to apply the principles to individual animals is a challenge," says Foster. "Horses also fall into an interesting intersection between livestock and companion animals, and objective

information comparing different welfare practices in horses is lacking."

Some best practices (i.e., 24/7 turnout vs. stalled part of the day) are situation-dependent. "Management and handling practices can set up the situation to give the horse an 'opportunity to thrive,' but every individual is different, and their history also plays a role," says Foster. "An animal's welfare status is assessed by looking for positive and negative welfare indicators, which involves evaluating the horse's health, emotional state, and behavior." **SM**