

A close-up, artistic photograph of a horse's head, focusing on its eye and the flowing mane. The horse has a rich brown coat and a dark, expressive eye. The mane is light brown and appears to be blowing in the wind, creating a sense of movement. The lighting is soft, highlighting the texture of the horse's skin and hair.

**Stable  
Management** VOLUME 21

**EXTRA**

**INTERPRETING  
EQUINE BODY  
LANGUAGE**

*Brought to you by:*

**HORSE  
WEEK**



# HORSE WEEK IS BACK



OCTOBER 9 – 15, 2022  
CELEBRATE THE HORSE AT  
**HORSEWEEK.TV**



BROUGHT TO YOU BY



Boehringer  
Ingelheim

THE ART OF HORSE



Correctly interpreting a horse's body language can provide substantial information about his emotional state.



# Interpreting Equine Body Language

Your horse's body language can give you signals about how he's feeling. If you take the time to learn these subtle signs, you may find your horse is communicating volumes of important information.

Nancy S. Loving, DVM

**Y**ou're probably familiar with how your dog communicates—a wagging tail, raised hackles, the play position, and snarling are all fairly easy to interpret. But while you may depend on the tail wag and eye and head position of your dog to alert you to his feelings, you will need a different level of finesse to read your horse. If you take the time to learn to “listen,” you may find that your horse is communicating volumes of information.

## Behavioral Signs of Discomfort

It's easy to decipher when a horse is upset or angry: the snaking neck, the bared

mouth, the threatening stance of potentially kicking out, the hunched back when saddled or girthed. It's also easy to determine when he is complacent and comfortable based on his soft eye, relaxed musculature, and cooperative nature.

More subtle signs of issues take a bit of time to sort out. It is often difficult to determine whether a horse is acting out “just because,” or if he is, in fact, feeling pain or discomfort. Signs of stress are sometimes obvious based on how a horse interacts with the environment, other horses, and people.

A horse with discomfort, pain, anxiety, or illness demonstrates many variable signs. A stoic horse that tends to internal-

ize his emotions may be difficult to read. Some signs are indicators of an obvious problem while others are more subtle and warrant further investigation.

Subtle changes in body language include:

- Decreased activity
- Lessened interest in surroundings
- Retiring to the back of the stall
- Standing with head lowered
- Decreased appetite
- Decreased interaction and socialization with other herd members
- Grumpiness

More overt signs of a problem include:

- Lessened weight bearing on a painful limb



A horse's ears are extremely expressive. Ears forward and relaxed demonstrate interest in what's ahead, droopy ears can signal relaxation, and pinned ears communicate anxiety and annoyance.

- Restlessness or depression
- Flank watching, pawing, rolling
- Self-mutilation, such as chewing on a painful leg
- Changes in attitude and/or performance
- Rearing or bucking when ridden
- Hypersensitivity of the flanks
- Aggression

Behavior-based assessments require longer periods of observation, particularly if a horse only experiences minor pain.

## Physiologic Signs of Distress

Veterinarians and scientists measure a horse's emotional state and/or pain based on an elevated heart rate, or with increases in blood cortisol and/or beta-endorphins, or elevated oxytocin levels obtained with blood testing. During periods of distress, oxytocin levels increase. Blink rate is associated with dopamine levels, which tend to elevate with pain.

Physical efforts to detect if a horse is experiencing pain or discomfort further rely on somewhat tedious and time-consuming methods such as the use of non-steroidal anti-inflammatory (NSAID) or opioid-type medications or hands-on manipulation and palpation of musculoskeletal structures. A horse's limb withdrawal from manipulation may direct attention to a painful area. If the horse improves on anti-inflammatory medications, that may point to a physical rather than solely a behavioral problem.

Yet, these parameters aren't easily measured without professional expertise, instrumentation, medication, or laboratory results. So, without relying on these proto-

cols, how can you figure out what your horse is "thinking?" Read on.

## Horse Grimace Scale (HGS)

A different paradigm of body language markers is currently used to effectively assess equine pain and discomfort. Not only are a horse's ears and eyes extremely expressive, but the mobility of the lips and nostrils further expresses emotion. A coding system of specific facial expressions has been developed to correlate with a horse's pain or discomfort: The Horse Grimace Scale (HGS) was developed by an Italian veterinarian, Emanuela Dalla Costa, and her colleagues.

Changes in equine facial expressions are detectable quickly and from a distance and so this assessment is applicable during routine daily work around the horses. Some training is helpful for the best discrimination of what you may be looking at.

Complex facial muscles enable a horse to express a wide range of facial movements that convey emotions. Easily recognizable facial action units (FAUs) include:

- Asymmetrical and lowered ears or ears held stiffly backwards
- Contraction and tension of the muscles above the eye area with tightening around the orbit
- A withdrawn and unfocused stare
- Strained or flared nostrils
- Muzzle tension and/or pursed lips with a pronounced (crescent-shaped) chin
- Tension of facial and chewing muscles

In a grooming study, discomfort was identified by specific postures and behav-

iors typical of FAUs: Neck held high, eyes wide open or showing the whites, tightened lips with a raised corner of the mouth, and asymmetrical ears.

This is in contrast to the "picture" of a content horse with a relaxed neck, half-closed eyes, an upper lip that is extended, immobile or twitching, both ears relaxed and pointing backward, and the horse often "chewing."

You can see that a good bit of emotional context of a horse centers around what their facial expressions are showing. Body postures are important, but volumes can be ascertained simply by watching the face, lips, muzzle, eyes, and ears.

## Ethogram for the Ridden Horse

Not all resting horses with musculoskeletal pain change their facial expressions, but under saddle, a horse often provides more discrete and definitive behaviors in addition to FAUs. What clues are discoverable in the ridden horse?

Dr. Sue Dyson and her team at the Center for Equine Studies at the Animal Health Trust in Britain developed a list of observable behaviors for horses under saddle. Their "ethogram" (a catalog of observed behaviors and activity) expands on the HGS to include facial and body expressions, and gait behaviors.

To start building the ridden-horse ethogram, facial expressions of the ears, eyes, nose, muzzle, mouth, and head position are cataloged while a horse performs under saddle. Other body markers are also taken into account, such as head posture, tail position, and head and tail movement. Gait markers provide useful information by cataloging a horse's speed and regularity of rhythm, responsiveness to rider demands, and adverse behaviors such as bucking, rearing, and sudden stops.

The ethogram catalogs 24 behavioral markers to differentiate a lame versus a non-lame horse. The list of possibilities is extensive. A horse displaying **eight or more** of these behaviors within a five-minute work period is likely experiencing some level of musculoskeletal pain:

- Repeated changes of head position
- Head tilted or tilting repeatedly
- Head in front of the vertical (>30°) or behind the vertical (>10°) for ≥ 10 s





A clamped tail or a swishing tail (especially during gait transitions) could indicate pain or irritation.

- Regularly changing head position such as tossing or twisting from side to side
- Ears are rotated back behind the vertical or flat (both or one only)  $\geq 5$  s; repeatedly lay flat
- Eyelids are closed, or half closed, for 2–5 seconds
- Sclera (white of the eye) is exposed
- Intense stare for 5 seconds
- Mouth opens or shuts repeatedly with teeth separation for  $\geq 10$  s
- Tongue is exposed, protruding or hanging out, and/or moving in and out
- Bit is pulled through the mouth on one side
- Tail is clamped tightly to the middle or held to one side
- Tail swishing in large movements—repeatedly up and down, side to side, or circular, especially during gait transitions
- A rushed gait (frequency of trot steps  $> 40/15$  s); irregular rhythm in trot or canter; repeated changes of speed in trot or canter
- Gait is too slow (frequency of trot steps  $< 35/15$  s); passage-like trot
- Hind limbs are not following tracks of forelimbs but instead deviate left or right; on three tracks in trot or canter
- Repeated leg changes at the canter: repeated strike off on the wrong leg; change of leg in front and/or behind; disunited
- Spontaneous changes of gait (e.g. breaks from canter to trot or trot to canter)
- Stumbling or tripping repeatedly; repeated toe drag
- Sudden change of direction against rider commands; spooking
- Reluctance to move forward (has to be

kicked or verbally encouraged); stops spontaneously

- Rearing
- Bucking or kicking backwards

Note that a stoic horse or one with a low-grade lameness may score  $< 8$ . Some behave normally in easy work, only showing signs of pain when performing more demanding movements and efforts. Different gaits may also elicit different behavioral responses.

The majority of non-lame horses score only 2—most commonly, opening of the mouth and the front of the head held behind the vertical. While a lame horse typically scores 9, some may demonstrate up to 16 different aberrant behaviors. Anesthetic nerve blocks that demonstrably eliminate pain from an injury or sore area result in a substantial reduction in the behavior score, thereby corroborating that behaviors stem from pain. Removal of pain that causes lameness often eliminates specific behavioral abnormalities, such as:

- Teeth grinding
- Constant bit chomping
- Sweating that is disproportionate to the work and environmental temperature
- Increased respiratory rate disproportionate to the work asked and the environmental temperature
- Increased respiratory noises in work the horse finds more difficult
- Grunting
- Increased blink rate
- Abnormal behavior when tacked up or mounted

## Composite Measure Pain Scale (CMPS)

Other protocols may be used to measure body language and pain. In addition to facial expressions and attitude, the Composite Measure Pain Scale (CMPS) combines behaviors—tooth grinding, flehmen (lip curl), pawing, sweating—and physical parameters like weight-bearing on a limb or lifting a leg in a protective posture. The Equine Pain Scale (EPS) combines FAUs with specific multiple behavioral parameters, such as activity level, position in the stall, posture and demeanor, weight bearing, head position, head movement, attention towards a painful area, interactive behavior, and appetite.

## The Bottom Line

In your daily routine around your horses, you can apply some of these strategies to assess if your horse is behaving abnormally. Catalog what his face, eyes, and ears are telling you. Watch how engaged your horse might be with others and his surroundings.

Is he his usual active and interactive self? How is his appetite, and his manure and urine output? Is he hiding in the back of the stall or paddock or standing forward, eagerly looking out the gate or window? Is he comfortably bearing equal weight on all limbs, or is he shifting weight or pointing one limb out in front or to the side? Is he holding his head comfortably and moving it normally? Does he keep looking at a leg or body part as if it is bothering him?

Putting all this information together can give you a good idea of whether or not your horse is comfortable at that moment.

While science has helped to catalog typical facial expressions, body postures, and behaviors, you, as a horse owner, will need time to clearly understand this new language of what your horse is communicating.

Horses speak volumes through their body and behavior if one knows what to look for, and then you can become more sensitive to warding off early problems.

Ideally, the earlier you recognize an issue, the sooner you and your veterinarian can jump on appropriate therapeutic measures to mitigate a horse's discomfort and prevent the development of secondary problems. Then you have a content horse that is willing to partner with you and perform well in your equestrian pursuits. **SM**



**HORSE  
WEEK**

# The Making of a Champion

To watch a horse in peak performance is to watch art in motion. Top riders like Cara Brewer and Bliss Heers know that it requires artistry-level care from a team to unveil a horse's true potential. Don't miss your chance to see how they mastered their craft and molded champions.



Taylor Breeding, NCHA Staff

Amy K. Drago

**OCTOBER 9 - 15, 2022**  
**WATCH FREE ON HORSEWEEK.TV**



**BROUGHT TO YOU BY**  
 **Boehringer  
Ingelheim** | **THE ART OF HORSE**