

The Ridden Horse Pain Ethogram*

A total behaviour score of ≥ 8 (out of 24) is likely to indicate the presence of musculoskeletal pain. Assessments are made in walk, trot and canter and on both reins.

1. Repeated changes of head position (up/down), not in rhythm with the trot
2. Head tilted or tilting repeatedly
3. Head in front of vertical ($>30^\circ$) for ≥ 10 s
4. Head behind vertical ($>10^\circ$) for ≥ 10 s
5. Head position changes regularly, tossed or twisted from side to side, corrected constantly
6. Ears rotated back behind vertical or flat (both or one only) ≥ 5 s; repeatedly lay flat
7. Eye lids (half) closed for 2–5 s; frequent blinking
8. Sclera exposed repeatedly
9. Intense stare (glazed expression) for ≥ 5 s
10. Mouth opening ffl shutting repeatedly with separation of teeth, for ≥ 10 s
11. Tongue exposed, protruding or hanging out, and/or moving in and out repeatedly
12. Bit pulled through the mouth on one side (left or right), repeatedly
13. Tail clamped tightly or held to one side
14. Tail swishing large movements: repeatedly up and down/side to side/circular; repeatedly during transitions
15. A rushed gait (frequency of trot steps $> 40/15$ s); irregular rhythm in trot or canter; repeated changes of speed in trot or canter
16. Gait too slow (frequency of trot steps $< 35/15$ s); passage-like trot
17. Hindlimbs do not follow tracks of forelimbs but repeatedly deviated to left or right; on three tracks in trot or canter
18. Canter repeated leg changes in front and/or behind; repeated strike off on wrong leg; disunited
19. Spontaneous changes of gait (e.g., breaks from canter to trot, or trot to canter)
20. Stumbles or trips more than once; repeated bilateral hindlimb toe drag
21. Sudden change of direction, against rider's direction; spooking
22. Reluctance to move forwards (has to be kicked ffl verbal encouragement), stops spontaneously
23. Rearing (both forelimbs off the ground)
24. Bucking or kicking backwards (one or both hindlimbs)

*ethogram developed by Dyson et al. 2018

