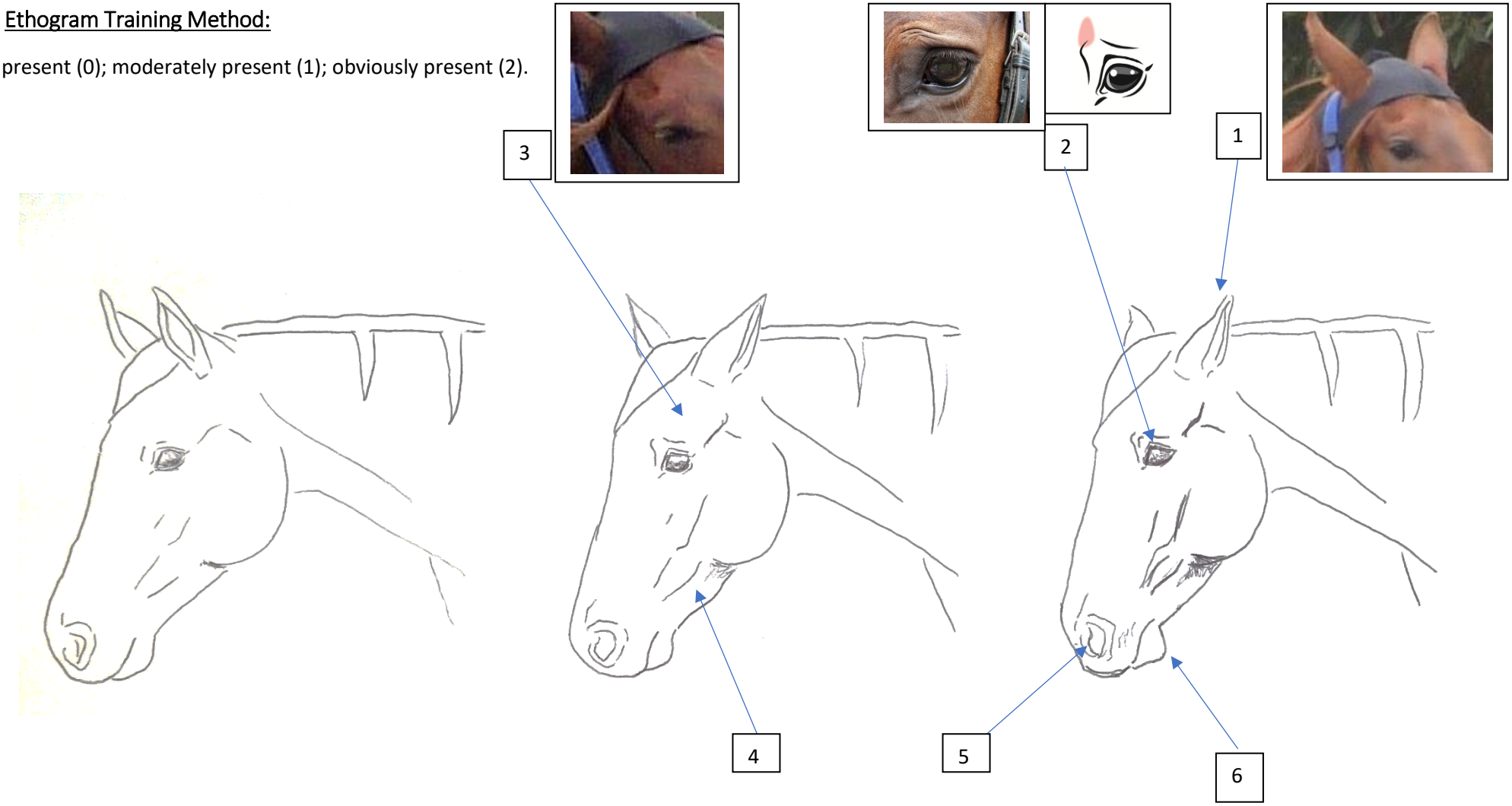
Ethogram Training Method:

not present (0); moderately present (1); obviously present (2).



Modified pictorial ethogram described by (Gleerup, Forkman, Lindegaard, & Andersen, 2015), supporting information for Horse Grimace Scale (HGS) (Dalla Costa et al., 2014)

1. Stiffly backward ears – *space between ears wider relative to baseline*
2. Orbital tightening – *eyelid is partially or completely closed; eye reduced more than half is obviously present.*
3. Tension above the eye – *contraction of the muscles above eye; increased visibility of underlying bone surfaces.*
4. Prominent chewing muscles – *straining chewing muscles clearly visible as an increase tension above mouth.*
5. Strained nostrils – *nostrils look strained and slightly dilated, profile of nose flattens, and lips elongate.*
6. Mouth strained and pronounced chin – *strained mouth is clearly visible when upper lip is drawn back, pronounced chin.*

Variables described by (Dyson, Berger, Ellis, & Mullard, 2017; Gleerup et al., 2015; Mullard, Berger, Ellis, & Dyson, 2017)

Ear position:

Ears Forward –

Both ears forward with pinnae facing forward

Erect to side –

Both ears erect, and pinnae point to side (divergent) i.e. 180º different directions to the side

One ear forward and one ear back -

One ear pinnae facing forward and one back towards the neck

One forward and one erect & to side –

both ears erect one to the front, and one to the side with pinna pointing to side, 90º different directions

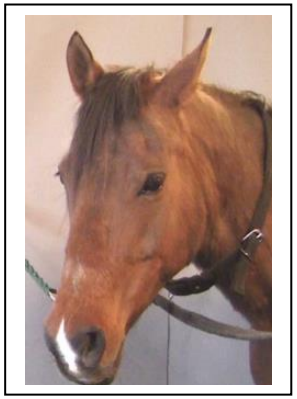
One to side and one to back –

One ear to the side (divergent) and one pinned back - 90º different directions

Both ears back –

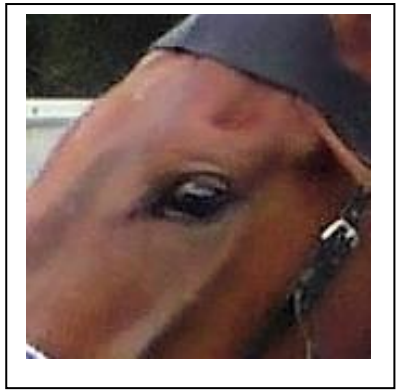
Both ears erect pinned back towards the neck

Expression:



Relaxed

Intense/glazed look



Sclera exposed –

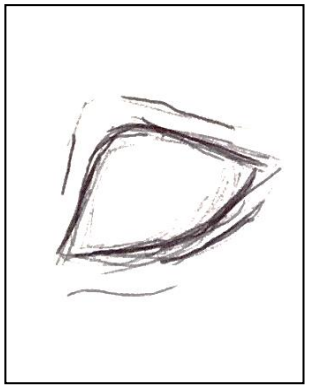
White surround eye is visible caused by tension of the levator palpebrae superioris muscle (which elevates the upper eyelid)

Eye shape:

Round Eye

Almond Eye

Orbital tightening:



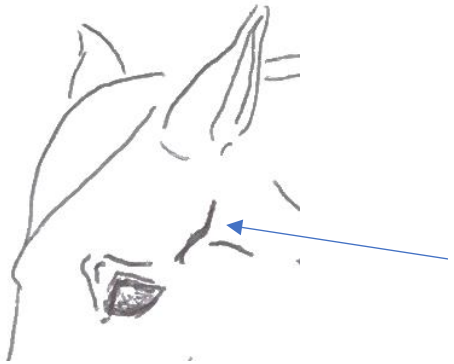
Not present

Moderately present –

Eye is partially closed

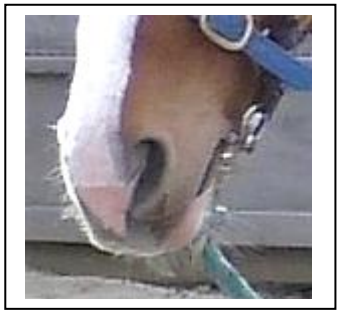
Obviously present –

Eye reduced more than half



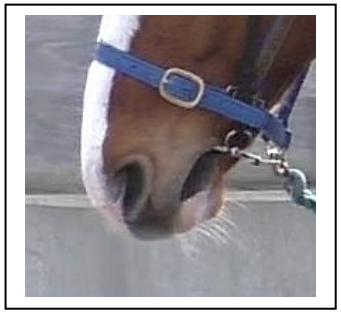
Tension caudal to the eye - *The zygomatic arch is more obvious because of tension in the muscles caudal to the eye.*

Nostrils:

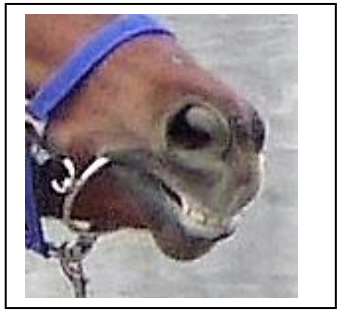


Relaxed/tear drop

Open wide, circular shape



Tense



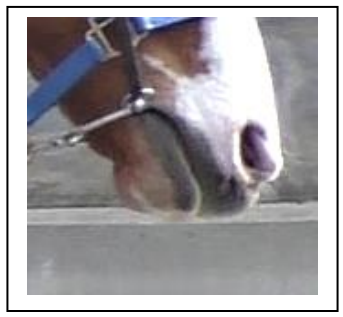
Wrinkle between nostrils present

Wrinkle between folds ventral to nostril towards lip present

Upper Lip:

Relaxed –

Muzzle relaxed with curved contour in line with lower lip



Tense –

Muzzle tense and angled

Tense and extended–

Muzzle tense and angled and upper muzzle extended

Lower Lip:

Relaxed –

Tense –

Direction of head –

Twisted nose to one side

References:

Dalla Costa, E., Minero, M., Lebelt, D., Stucke, D., Canali, E., & Leach, M. C. (2014). Development of the Horse Grimace Scale (HGS) as a Pain Assessment Tool in Horses Undergoing Routine Castration. *PLOS ONE, 9*(3), e92281. doi:10.1371/journal.pone.0092281

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