



International Society
for Equitation Science

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Ethical Equitation for all Equestrian Disciplines
Breaking Barriers and Building Bridges
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www.ises2015vancouver.com

When I look into your eyes:

What eye wrinkles in horses tell us about their emotional state

Horses display many different facial expressions with the eyes being highly expressive due to the wrinkles above the eye ball which some people working with horses use as an indicator of uneasiness or discomfort and others call worry wrinkles or worry lines. This raises the question of “Can we use horses’ eye wrinkles as an easy and non-invasive indicator of a horses’ emotional state?” To date there has not been any scientific study investigating the effect of emotion on the expression of eye wrinkles.

Wrinkles above the eye ball within the inner brow area result from the contraction of the underlying inner eye brow raiser muscles. Eye wrinkles are common in horses but differ in number and shape between horses and within individuals.

A team of researchers from Switzerland, United Kingdom and the United States asked whether eye wrinkles are caused by negative emotional states in the horse or if they are

simply an anthropomorphic interpretation based on the fact that humans associate wrinkles at the inner eye brow with worriedness.

The aim of the study was to investigate whether there was a relationship between eye wrinkles and emotional states in horses. The study took place at the Swiss National Stud Farm in Avenches, Switzerland using 16 horses most of whom were Franches-Montagnes stallions.

Researchers induced different emotional states in the horses and assessed whether situations presumed to be positive (anticipation of a food reward and petting) would reduce the expression of eye wrinkles or situations presumed to be negative (food competition and waving a plastic bag) would increase it. All four test conditions were chosen on the basis of being things that horses were reasonably likely to encounter within their regular management system.

During the study a professional photographer captured pictures of both of the eyes of each of the horses' whilst being tested in all four conditions. Analysis of the number of wrinkles, the extent of wrinkling and how much white of the eye was shown led to the conclusion that some characteristics of eye wrinkling were affected by different emotional states.

Researchers concluded that emotional states may be linked with characteristics of eye wrinkle expression and may therefore be a potential indicator of horse welfare; however further research is needed.

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The International Society for Equitation Science conference offers an outstanding international platform for scientists and professional practitioners to present and discuss research related to the field of equitation science. For more information about the ISES 2015 conference, venue and programme: <http://www.ises2015vancouver.com/>

The International Society for Equitation Science (ISES) is a not-for-profit organisation that aims to facilitate research into the training of horses to enhance horse welfare and improve the horse-rider relationship.

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