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Timeframe for a novel horse to become familiar in a group

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The case of familiarity in equine husbandry is not a topic that has suffered vast amounts of examination. During their lifetime domestic horses will most likely experience multiple changes in their social environment such as being sold, moved, and sent to training amongst other things. In recent years a considerable amount of studies have shown the benefits of group-housing on horses, and familiarity timeframes are of genuine importance in management of such systems.
It is our intension to determine the timeframe a novel horse faces before it is recognized as being familiar in an already established group, what factors are of importance and the level of injuries sustained in the introduction period.
24 2-year old Danish Warmblood fillies were used for this study in two blocks of 12 horses. The familiar horses, titled the K-group, consisted of 16 horses and the U-group, the unfamiliar horses, of 8. The horses came from different studs to ensure no prior contact between the two groups of test animals. They were all raised in stable group-housing systems and thereby accustomed to social interactions between conspecifics.
Prior to pairing the K-horses up, nearest-neighbour observations was performed in the holding paddock to ensure the two horses were in fact familiar and would act as an established group.
8 groups of 3 individuals, 2 familiar and 1 unfamiliar, were held in separate paddocks measuring 80x80m. The horses were within eyesight of the other groups but were not able to have any physical contact.
Behavioural observations were performed for 20 minutes per group upon letting the U-horse enter, and then for one hour per group (3x20mins) every Monday, Wednesday and Friday the following 16 days. On day 0, 1, 2, 4, 8 and 16 they were tested for individual preference within the group, and on test day 1 and 16 any injuries sustained were also noted. Dominance rank within the groups was determined by a group-feeding test on the last day of observation.
Preliminary results from the first block indicate an overall timeframe of 6-7 days for familiarity to develop, established by observational data such as fading of greeting behaviour and decrease in distance between the three horses in the respective groups. It was also indicated that aggression between horses in the groups is not determined by familiarity but by dominance rank.
Results from the full experiment will be presented.

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