

Group housing horses under Nordic conditions: Strategies to improve horse welfare and human safety

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Group housing horses under Nordic conditions

- * Horse welfare
 - many obvious benefits
 - some challenges
- * Human safety
- * Focus on common “beliefs” regarding group housing



Aim



- * To provide practical solutions that can improve horse welfare and human safety
- * More knowledge on the behaviour of horses toward other horses and humans

Focus of the project

- * Develop a system for injury recording
- * Safety aspects when taking a horse out of the group
- * Horse group composition
 - effect of gender (i.e. mares, geldings, mixed groups)
 - effect of age (i.e. young horses, young horses with an older horse)
 - effect of stability (i.e. stable, dynamic)
- * Introduction of horses into groups (Ph.D.-project)
- * Environmental enrichment in paddocks

Injuries in group housed horses

- * Risk
 - kicks and bites from other horses
 - chasing: into fences/obstacles or hurts itself
- * Risk of injuries probably main reason for keeping horses singly
- * Kicks can result in very severe injuries
- * But how common are injuries? And how severe?



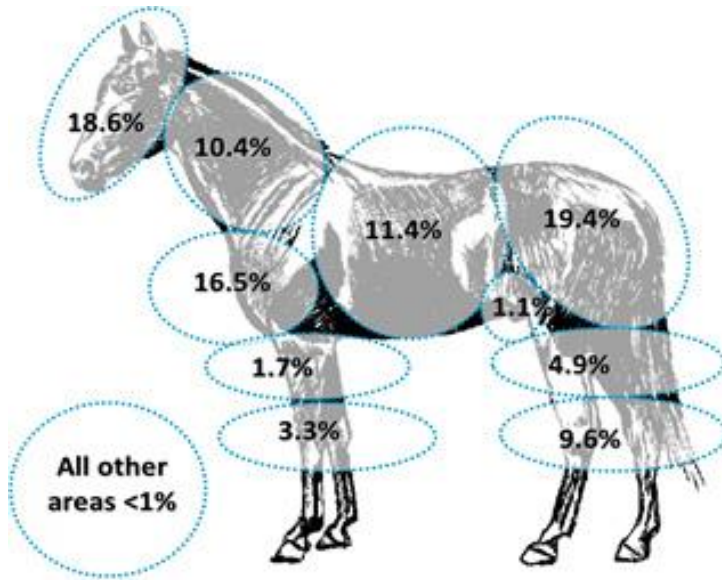
Injury recording

- * Cat. 1 (mild) to 5 (severe)
- * Tested on students (using photos)
- * Result:
 - Acceptable high degree of inter observer agreement
- * Examined 100 riding horses + >100 in NKJ-project groups
 - Recording system useful to quantify injuries

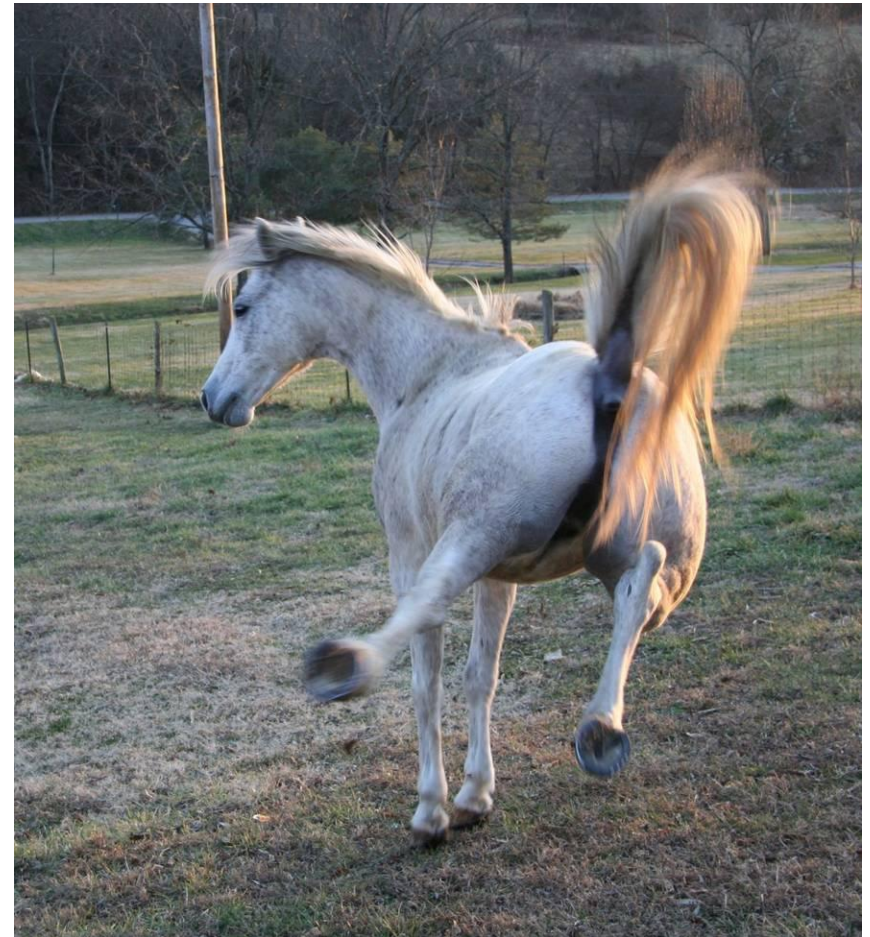


Mejdell, C.M., Jørgensen, G.H.M., Rehn, T., Fremstad, K., Keeling, L., Bøe, K.E. 2010. **Reliability of an injury scoring system for horses.** Submitted for publication.

Results, injuries



- No serious injuries (i.e. cat. 4 or 5) were found
- 816 injuries in 378 horses
- Most on the day after establishing new groups



Group composition - effect of gender

- * Gender composition does not significantly influence on social interactions, spacing or injuries
 - 80% of aggressive interactions are threats
 - geldings and horses in mixed groups display more play behaviour than mare groups



Jørgensen, G.H.M., Borsheim, L., Mejdell, C.M., Søndergaard, E., Bøe, K.E. 2009. **Social interactions and spacing in horses grouped according to gender.** *Appl. Anim. Behav. Sci.* 120, 94-99.

Group composition – effect of age

- * More aggressive behaviour in groups of only young horses
- * More friendly behaviour in groups of young horses with an older horse



Hansson, K., Søndergaard, E., Halekoh, U. 2010. **Grouping horses according to age ? effects on social behaviour, spacing and injuries.** Manuscript in prep.

Group composition - stability

* Stable versus dynamic groups

- 15 groups of 3 horses
 - 7 stable, 8 dynamic
 - a total of 45 horses
 - 2 year old fillies
- Danish Warmblood

* Effect on

- social behaviour
- Injuries

* Results not ready yet



Søndergaard, E., Halekoh, U., Christensen, J.W.C., Thodberg, K. 2010. **The effect of stability on social interactions and spacing in horse groups.** Manuscript in prep.

Comparison of three methods for mixing unfamiliar horses



Hartmann, E., Keeling, L. J., Rundgren, M, 2010. Comparison of three methods for mixing unfamiliar horses (Equus caballus). In publication, Journal of Veterinary Behavior.

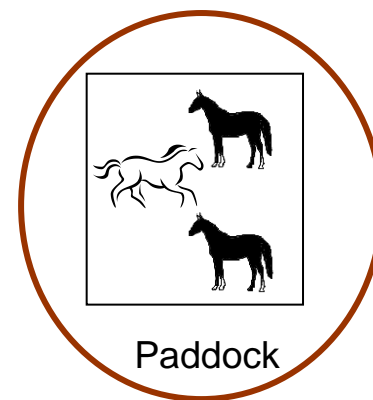
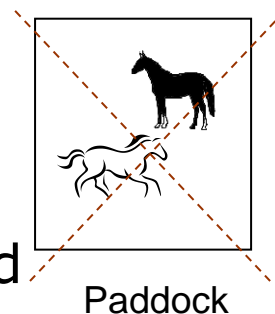
Comparison of three methods for mixing unfamiliar horses

- No differences in frequencies of aggressive behaviours between the three mixing methods
- Unfamiliar horses did not receive more aggression when meeting 2 horses at once compared to meeting 1 horse
- Resident horses were overall more aggressive

Conclusion:

Preferable to mix an unfamiliar horse with 2 resident horses at once instead

of one by one *because* total aggression received by the unfamiliar horse will potentially be less.



Horses injure each other

Injuries occurred twice during 46 paddock tests... BUT were minor!
(skin damage with hair loss)



Conclusions

- * Group housing has many benefits regarding horse welfare
- * Serious horse injuries uncommon in our study
- * Arguments for single sex groups not supported
- * Positive effect of an older horse in groups of young horses
- * Group stability?
- * Aggression levels depend largely on management factors and can be kept low
- * Safety aspects and convenience for humans
 - generally not problematic to get hold of and remove the horse
 - safety precautions can be taken



Perspectives

- * Group size: In our study most groups were small
- * Injuries: In our study most horses were unshod
- * Social experience: In our study most horses were young and/or had previous experience with group housing
- * Still many things to investigate regarding introduction of horses into groups
- * Safety aspects and convenience for humans must always be an issue in group housing of horses





Thank you
for your attention!

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www.group-housing-horses.net