

Embracing equitation science into veterinary practice

Elke Hartmann

Swedish University of Agricultural Sciences, Uppsala, Sweden
elke.hartmann@slu.se

Equitation Science is a relatively new scientific discipline that aims to provide an objective, quantifiable understanding of horse-human interactions with the ultimate goal of advancing horse welfare and human safety (McGreevy, 2007). Equitation science brings together a range of scientific approaches, such as ethology, psychology, and biomechanics to evaluate the effectiveness, and the welfare consequences, of various horse training methods. The use of innovative technology can provide objective data on, for example, how much rein tension is too much, how discomfort and learned helplessness is expressed in horses and what pressures are applied via the riders' seat and legs to elicit a response in the horse. Most importantly, equitation science explains horse training from a learning theory perspective, clarifying the roles of non-associative and associative learning processes in the horse (McGreevy and McLean, 2007). Traditionally, this approach has been bypassed in riding manuals, leaving space for interpretation and anthropomorphic centered approaches to horse training (Waran et al., 2002; Warren-Smith and McGreevy, 2008) that confuse riders and horses alike.

Horse riding and training in its wide range of forms is continuously under public scrutiny, especially from a welfare perspective. The high number of rider accidents in comparison to other sports and the high wastage rates among horses that become unusable or dangerous as a result of regular unsound or excessively risky handling emphasizes the importance of embedding equitation science into practical contexts (Hawson et al., 2010). Barriers to progress in the uptake of equitation science into practice may reflect different cultures of scientists, practitioners and lay people alike, where each group uses different terminology leading to confusion and misinterpretation (Waran et al., 2014).

Education is the key to bridging the gap between science and practice (McGreevy and McLean, 2010). Veterinary professionals are important stakeholders in this process as they have a direct influence on horse welfare and clients' commitment to best practice. Furthermore, they may also frequently encounter horses that are difficult to handle during routine clinical examination and medical treatment, potentially jeopardizing the safety of themselves and their team, but also owners and horses (Geng and Adolfsson,

2008; Lucas et al., 2009). Knowledge of equine behaviour and the effective application of learning theory can help prevent fear responses in horses, lower stress levels as well as decrease the risk of injury in humans and boost confidence in clients.

This presentation will present some simple approaches to handling the challenging equine patient, such as overshadowing, negative and positive reinforcement techniques used to deal with horses that are needle- and head-shy or refuse to go into examination stocks. It will also give an example of how equitation science has been successfully embedded into tertiary veterinary education and clinical practice at the Royal (Dick) School of Veterinary Studies in Edinburgh, Scotland. Ultimately, this presentation aims to explore ways in which education can help bridging the gap between theory and practice.

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