Experience the Haptic Horse

The Haptic Horse draws on haptics technology, or virtual touch, to give trainee veterinarians the skills to carry out a systematic rectal palpation of a horse. Advantages of the haptic training sessions include the teacher being able to follow and direct the student’s examination, which is normally very difficult, and training can be customised to an individual student’s learning needs. Equine colic conditions simulated by Haptic Horse include pelvic flexure impaction, dilated loops of the small intestine (‘twisted gut’) and displacement of the large colon.

Transform your experience

This unique, cost-effective Virtual Reality (VR) training system allows unlimited practice and enables students to develop a systematic examination technique and to experience serious and potentially fatal conditions. Haptic Horse’s simulator-based training allows students to be trained prior to examining real animals, which has benefits for animal welfare. Haptic Horse is being marketed by Virtalis, leaders in VR and Advanced Visualisation.

“It was actually students who had used the Haptic Cow who suggested the development of the Haptic Horse. I was able to build on what I had learned developing the first trainer as I created the equine version. The haptic system gives the students the chance to ‘feel’ abdominal organs and structures as they practice and refine their skills.”

Prof. Sarah Baillie of University of Bristol and inventor of the Haptic Horse & Cow.

KEY BENEFITS:

• Improved identification & palpation skills for students.
• More efficient and effective one-to-one teaching with quick set-up and good visibility leads to improved teaching and feedback.
• Using the Haptic Horse in a role-play improves students’ communication.
• Consideration for animal welfare.
FLEXIBLE AND ACCESSIBLE TRAINING

A validation study conducted between two groups of students, none of whom had carried out a rectal examination of a horse, showed that Haptic Horse trained students were found to be more systematic in their examination technique and also more able to differentiate normal from abnormal than the group taught using established methods.

During simulator training, the student palpates the virtual organs while interacting with a Phantom haptic device (from the Sensable Group in Geomagic). The teacher has the advantage of being able to see and follow the student’s actions, both directly and on the monitor, which is not possible in the real horse. Therefore, the teacher can operate more effectively, guiding movements, identifying structures palpated and providing feedback on performance.

Teaching protocols have been developed for use with both the Haptic Horse and Cow simulators, which have a series of levels to support the progressive acquisition of palpation skills.

“The underlying principles of the Haptic Cow and Horse accord with our ethical philosophy perfectly. By exposing our students to the virtual trainer in advance of interventions on live animals, we may reduce stress and optimise welfare. Naturally, we also expect to improve teaching too, most especially by exposing students to conditions they are unlikely to meet for real during their course. All the different sorts of equine colic are prime examples. Colic is often an emergency condition, so arranging training during such a situation is often not possible.”

Marc Dilly, Director of Clinical Skills Laboratory, University of Veterinary Medicine Hannover.