

## Study: Horses adjust to a rider's weight

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A study showing horses change their back position and alter limb movements to adjust to a rider's weight was presented Tuesday in Canterbury, England.

The research by Patricia de Cocq and colleagues at Wageningen University in the Netherlands shows a horse's saddle and the weight of its rider can directly affect equine performance, causing spinal abnormalities in racehorses and show jumpers.

The researchers analyzed horse biomechanics with and without 165 pound loads. The scientists also measured the degree of back-extension and flexion using data obtained on the relative position and angle of the horse's vertebrae. They found weight induces an overall extension of the back, which may contribute to soft tissue injuries.

"We consider the changes in limb movement to be a compensatory mechanism for the changed back-position", said de Cocq. "If causes of back pain are known, preventive measures can be taken. The techniques used in this study can be used to compare the comfort for the horse of different saddle designs, which may then improve horse performance."

The study was presented Tuesday at the University of KENT during the annual meeting of the Society for Experimental Biology.

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