# The effect of McTimoney chiropractic treatment on pressure measurements beneath the saddle

*Aims:* To investigate the effects of McTimoney chiropractic treatment on the equine back, by measuring pressure beneath a saddle before and one day after treatment.

*Method:* Mean overall pressure (MOP) and mean peak pressure were measured in 12 horses with their own saddles, while being ridden down a straight 30m track in walk, rising trot and sitting trot. Readings were taken using the TekScan CONFORMat pressure sensing system before and one day after McTimoney chiropractic treatment. The treatment group (n=6) received McTimoney chiropractic treatment; the control group (n=6) received an assessment but no treatment intervention. Pressure differentials were calculated by comparing differences between before and after pressure values.

*Results:* The treatment group showed a significant reduction in MOP ($P<0.001$) and mean peak pressure ($P<0.001$) at walk, rising trot and sitting trot following McTimoney chiropractic treatment. Rising trot showed the greatest change to MOP (15%) and mean peak pressure (11.4%). Sitting trot showed 12.5% change to MOP and 11.2% change to mean peak pressure. Walk had the smallest change to MOP (9.5%) and mean peak pressure (8%). There was no significant difference in pre/post MOP ($P=0.183$) or mean peak pressure ($P=0.792$) for the control group..

*Conclusions and potential relevance:* McTimoney chiropractic treatment had a significant effect on the pressure beneath a saddle one day after treatment, reducing mean overall pressure and mean peak pressure at walk, rising trot and sitting trot. It is thought that McTimoney chiropractic treatment reduced the overall tension in the back muscles, and more evenly distributed the same force of saddle and rider, which

resulted in lower mean pressure values. The results suggest that saddle fitting/checking should not be done within 24 hours of treatment due to the change to the horses' back, but it is not clear from this study when exactly saddle fitting would be appropriate after treatment. Further work would be required to understand the longer term effect of the treatment on saddle pressure and whether it has an effect on saddle fit overall.