

# An investigation into the effects of McTimoney chiropractic treatment on the axial rotation of the equine pelvis

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## 1. Key Points

- Aim: to assess the effect of a McTimoney treatment on the pelvic asymmetry of the horse over a 3 week period.
- Method: quantitative, repeatable measurements of the axial rotation of the equine pelvis.
- Outcome: objective positive evidence for McTimoney treatment in improving postural pelvic asymmetry in sound horses.

## 2. Background

Asymmetry between the left-right tuber coxae (L-R TC) height may or can indicate restriction in the range of rotation of the pelvis around the axis.

The purpose of this study was to quantitatively assess the effect of McTimoney chiropractic technique on the axial rotation of the pelvis, aiming to reduce static pelvic asymmetry.

## 3. Methodology

14 sound riding club horses were used (4 mares, 10 geldings; mean age = 12.6 years; mean height = 165 cm).

Whilst standing square, the level height of the dorsal aspect of L-R TC to the floor was measured (pilot study yielded  $P < 0.0001$  intra-assessor repeatability).

Measurements were taken immediately before and after a single McTimoney treatment session, and repeated after 2 days, 10 days and 21 days.

The McTimoney treatments were conducted by the same practitioner, and included an appropriate left or right dorsal rotation adjustment, on the ventral side of the pelvis.

## 4. Results

The pilot study demonstrated that repeat measurements of the of left-right tuber coxae height for 2 horses over 5 trials yielded significant repeatability ( $p < 0.001$ ).

The prevalence of left or right ventral rotation of the equine pelvis's was evenly distributed.

A repeated measures ANOVA yielded a significant reduction ( $p < 0.001$ ) in L-R TC height difference throughout the 3 week assessment period. (Figure 1).

A significant difference ( $p < 0.05$ ) was maintained between the L-R TC height difference for up to 3 weeks following McTimoney treatment (Figure 1).

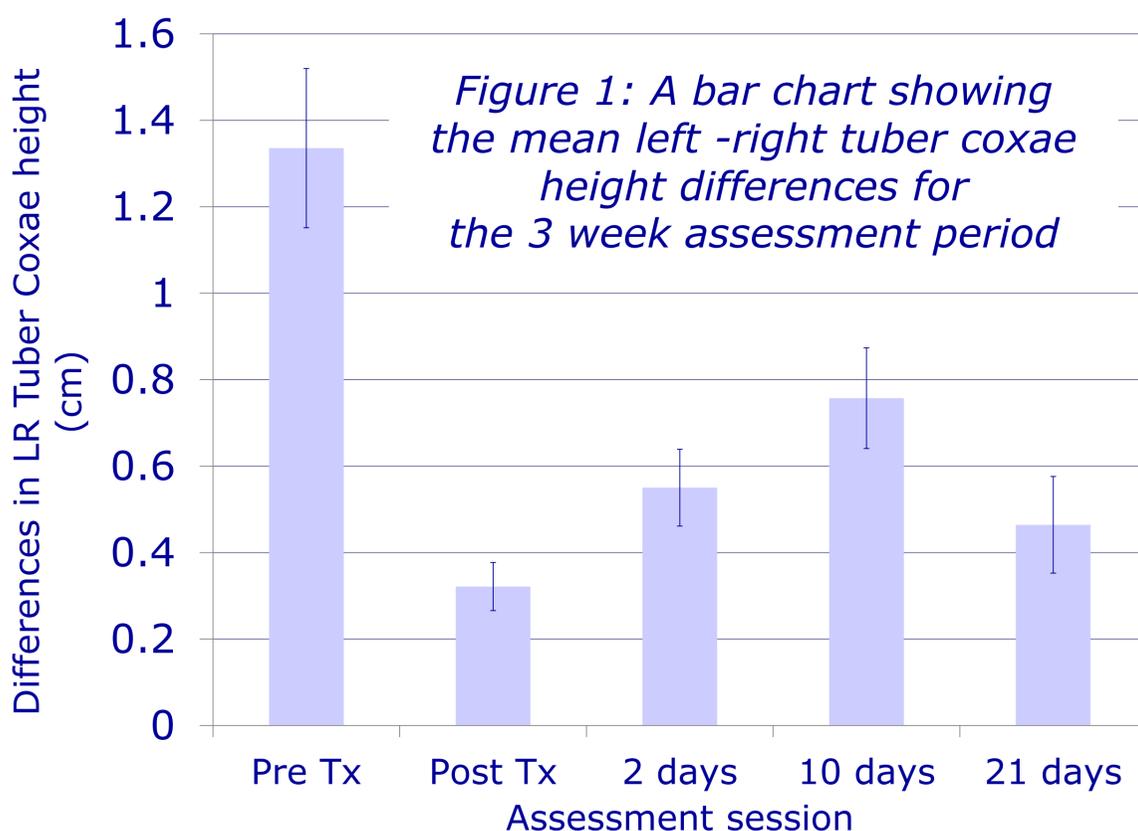


Figure 1: A bar chart showing the mean left-right tuber coxae height differences for the 3 week assessment period

## 5. Conclusion

- McTimoney treatment reduced the difference between the left - right tuber coxae heights in sound horses.
- The pelvic axial rotation adjustment improved pelvic symmetry for at least 3 weeks.
- Only one variable (rotation) was measured to assess pelvic asymmetry.
- Further investigation is warranted on larger cohorts of cases, longer follow-up periods, measuring pelvic asymmetry using different factors i.e. pelvic cranial-caudal tilt, hindquarter muscle mass or activity, and other effects of the treatment.