

## **Abstract**

10 subjects suffering from essential hypertension were eligible for this osteopathic research study that aimed to determine the effects of the rib raising technique on blood pressure (BP).

Subjects had treatment on four occasions at weekly intervals receiving either the rib raising technique or a sham treatment at alternate visits from the same researcher. At each visit systolic and diastolic blood values were recorded at 5 minutes before and just before the intervention and just after the intervention and again at 5 minutes after intervention. Initial investigation found no significant differences between the 5 minutes before and the just before treatment time points or between the just after and 5 minutes after treatment time points and the mean of both 'before' and both 'after' treatment measurements were therefore used in a repeated measures ANOVA to determine changes over time and before/after differences for each treatment session.

The results of the repeated measures analysis showed a significant effect of the time due to there being a decrease in both in systolic BP ( $P = 0.041$ ) and diastolic BP ( $P < 0.001$ ) over the course of the study. Specifically, mean BP measurements, both before and after treatment, were highest at the first visit and lower at subsequent visits. However, no differences were observed when comparing the before and after measurements at each visit.

Although the rib raising technique had no immediate effects on BP in subjects with essential hypertension, the decrease in BP following the first treatment session could potentially have been a treatment effect. However, the fact that all participants underwent the same sequence of intervention, together with the possibility of a comfort effect due to subjects becoming familiar with what to expect at subsequent visits and the fact that it was not known if subjects had recently started anti-hypertensive drug therapy, means that further studies are now required in order to

determine if the decrease in BP was directly due to the treatment received at the first study visit.

**Keywords** – Blood pressure, essential hypertension, rib raising, osteopathy