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## The acute effects of integrated myofascial techniques on lumbar para spinal blood flow compared with Kinesio taping: a pilot study

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**Background:** Myofascial techniques and Kinesio taping are therapeutic interventions used to treat low back pain. However, limited research has been conducted into the underlying physiological effects of these types of treatments.

**Objectives:** The objective of this study was to compare the acute effects of integrated myofascial techniques (IMT) and Kinesio tape (KT) on blood flow at the lumbar paraspinal musculature.

**Methods:** Forty-four healthy participants (18 male and 26 female) (age, 26±SD 7) volunteered for this study and were randomly assigned to one of the three interventions, IMT, KT or a control group (Sham TENS). Paraspinal blood flow was measured at the L3 vertebral level, using near infrared spectroscopy (NIRS), before and after a 30-minute treatment. Pain pressure threshold (PPT) was also measured before and after treatments.

**Results:** A one-way ANOVA indicated a significant difference between groups for O<sub>2</sub>Hb [F (2-41)=41.6, P<0.001], HHb [F (2-41)=14.6, P<0.001] and tHb [F (2-41)=42.2, P<0.001]. Post hoc tests indicated that IMT was significantly greater, from the KT and the control treatments (P<0.001), for changes in O<sub>2</sub>Hb, HHb, and tHb. There were no significant differences for PPT [F (2-41)=2.69, P=0.08], between groups.

**Conclusion:** This study demonstrated that IMT increases peripheral blood flow at the paraspinal muscles in healthy participants compared to KT and sham TENS. The change in blood flow had no impact on pain perception in the asymptomatic population group.

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