

## ORAL PRESENTATIONS

### OP7

# Effectiveness of Buerger-Allen Exercise with Kinesio Taping on Lower Extremity Perfusion among Diabetic Individuals: A Randomised Controlled Trial

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## ABSTRACT

**Background and Objectives:** Diabetes Mellitus presents a significant global health concern, accompanied by a substantial economic burden. In the diabetic demographic, the heightened prevalence of peripheral arterial disease is attributed to compromised lower extremity perfusion, adversely affecting functional capabilities. Despite the conventional use of the Buerger-Allen exercise to enhance lower extremity perfusion, a literature gap exists regarding the concurrent application of Buerger-Allen exercise and kinesio taping. This study aims to investigate the immediate effect of Buerger-Allen exercise with kinesio taping on lower extremity perfusion among individuals with diabetes. **Methods:** In this randomised controlled trial, 40 participants with Type 2 Diabetes Mellitus were randomly assigned to the experimental group ( $n=20$ ) or the control group ( $n=20$ ). The experimental group received Buerger-Allen exercise with kinesio taping applied to the gastrocnemius muscle, while the control group received Buerger-Allen exercise only. The ankle-brachial index (expressed as the common circulatory score of the left and right) was used to measure the lower extremity perfusion. Dependent t-tests and independent t-tests were employed for data analysis. **Results:** A total of 40 diabetic individuals with a mean age of 69.72 ( $\pm 6.47$ ) were enrolled. Significant improvements in lower extremity perfusion were observed in both groups. The mean difference in the ankle-brachial index value was 0.072 ( $\pm 0.05$ ) for the experimental group ( $p < 0.05$ ) and 0.07 ( $\pm 0.06$ ) for the control group ( $p < 0.05$ ). No significant difference was found between the two groups. **Conclusion:** Buerger-Allen exercise is effective in improving lower extremity perfusion among diabetic individuals. The addition of kinesio taping does not yield additional significant improvement.

**Keywords:** Buerger-Allen exercise; kinesio taping; lower extremity perfusion; Diabetes Mellitus

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