



Research

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## A pilot study on using acupuncture and transcutaneous electrical nerve stimulation (TENS) to treat knee osteoarthritis (OA)

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### Abstract

#### Background

The present study tests whether a combined treatment of acupuncture and transcutaneous electrical nerve stimulation (TENS) is more effective than acupuncture or TENS alone for treating knee osteoarthritis (OA).

#### Methods

Thirty-two patients with knee OA were randomly allocated to four groups. The acupuncture group (ACP) received only acupuncture treatment at selected acupoints for knee pain; the TENS group (TENS) received only TENS treatment at pain areas; the acupuncture and TENS group (A&T) received both acupuncture and TENS treatments; the control group (CT) received topical poultice (only when necessary). Each group received specific weekly treatment five times during the study. Outcome measures were pain intensity in a visual analogue scale (VAS) and knee function in terms of the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC).

#### Results

The ACP, TENS and A&T groups reported lower VAS and WOMAC scores than the control group. Significant reduction in pain intensity ( $P = 0.039$ ) and significant improvement in knee function ( $P = 0.008$ ) were shown in the A&T group.

#### Conclusion

Combined acupuncture and TENS treatment was effective in pain relief and knee function improvement for the sampled patients suffering from knee OA.

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