



## Kinesio taping for sports injuries

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## Kinesio taping for sports injuries

- ▶ Williams S, Whatman C, Hume PA, *et al*. Kinesio taping in treatment and prevention of sports injuries. A meta-analysis of the evidence for its effectiveness. *Sports Med* 2012;**42**:153–164.

### BACKGROUND

Kinesio tape is a proprietary product that purports to offer a range of benefits in the treatment and prevention of various musculoskeletal conditions. Kinesio taping involves the application of elastic adhesive tape to areas of pain or dysfunction. Theorised mechanisms of action are diverse, including reduction of pain through stimulation of sensory afferents<sup>1</sup> and increased range of motion (ROM) due to enhanced local circulation.<sup>2</sup> Despite a recent increase in public profile due to use of kinesio taping by athletes at major sporting events, the clinical benefits of the intervention remain unclear.

### AIM

To review the evidence for the effectiveness of kinesio taping for the prevention and treatment of sports injuries.

### SEARCHES AND INCLUSION CRITERIA

Biomedical and sports-related databases including MEDLINE, Scopus, ScienceDirect and SPORTDiscus along with sports medicine websites were searched for potentially eligible articles. Only the search term: 'kinesio taping/tape' was used. Studies were eligible for inclusion if they reported a musculoskeletal outcome (eg, pain, ROM, strength or proprioception); compared a kinesio tape condition with comparison condition and had full-text published in English. Methodological quality was assessed in the included studies based on three items: randomisation, subject blinding and assessor blinding.

### INTERVENTIONS

Any study that reported the application of kinesio tape as the index intervention was eligible for inclusion. Comparator groups included no treatment, placebo taping and sham treatments. Description of the sham interventions is not provided in the review.

### MAIN OUTCOME MEASURES

Outcome measures extracted from the included studies were: pain, ROM, strength, proprioception and muscle activity. The authors extracted and reported only the results in the included studies that showed a statistically significant difference between the kinesio taping and control groups.

### STATISTICAL METHODS

Despite the title of the review, the authors do not report a meta-analysis of the included studies. Individual comparisons from the included studies (only statistically significant results) are evaluated using a metric designed to facilitate clinical interpretation.<sup>3</sup>

The authors determined thresholds for clinical benefit on each outcome based on existing literature. Where no previously validated thresholds for an outcome measure existed, one-fifth of the baseline SD of the measure was used as the threshold. If no baseline data were provided in the included studies, a threshold for clinical benefit was agreed on by the authors. The authors then used these thresholds to infer the likelihood that each effect was beneficial, trivial or substantially harmful.

### RESULTS

Ten controlled studies were included in the review, with sample sizes ranging from 14 to 65. Only two randomised studies blinded participants as well as assessors. Three of the ten studies included patients with a musculoskeletal condition, two of which were sports-related. Seven studies that recruited healthy individuals were included on the basis that kinesio taping may have a preventative action, however none of these studies provided a direct measure of injury prevention.

Kinesio taping was compared with sham treatment for pain relief in one study (n=41), no clinically beneficial results were found. There were inconsistent results for ROM outcomes, with small clinically beneficial results seen in two studies, but trivial results in two other studies. In one study of 21 healthy athletes, there was a likely beneficial intervention effect for proprioception regarding grip force sense error, but no positive impact on ankle proprioception.

While intervention appeared to be beneficial for a number of outcomes relating to strength, there were also numerous trivial findings and the majority of results were non-significant. These studies were also conducted mostly in healthy populations. Reported effects on muscle activity included a mix of substantial, trivial, unclear and non-significant findings.

All the results and subsequent conclusions of the review are based only on comparisons that showed a significant difference between treatment and comparison groups in the included studies.

### LIMITATIONS

The review has several flaws, the most serious of which is selective reporting of outcomes. As only positive (significant) results are reported it is not possible to assess the entirety of the evidence for effectiveness of kinesio taping.

In addition, while the authors report to have followed the methodological guidelines of the Cochrane Collaboration this does not appear to be the case. Recommended methods of presenting between group comparisons (eg, mean differences), extraction of all relevant data, complete assessment of risk of bias and adoption of the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach to describe quality of the evidence would make interpretation more straightforward.

### CLINICAL IMPLICATIONS

Kinesio taping does not appear to have a beneficial effect on pain when compared with sham treatment. Based mostly on studies of healthy populations, there are inconsistent results for other outcome measures such as ROM, strength, muscle activity and proprioception. This systematic review has serious methodological limitations that compromise the reliability of the conclusions. Clinicians should look to other sources of information in determining whether or not to apply this intervention. At present there appears to be little high quality evidence on which to assess the effectiveness of kinesio taping, it is hoped that future research will clarify the situation.

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**REFERENCES**

- 1 Thelen MD, Dauber JA, Stoneman PD. The clinical efficacy of kinesio tape for shoulder pain: a randomized, double blinded, clinical trial. *J Orthop Sports Phys Ther* 2008;**38**:389–95.
- 2 Yoshida A, Kahanov L. The effect of kinesio taping on lower trunk range of motions. *Res Sports Med* 2007;**15**:103–12.
- 3 Batterham AM, Hopkins WG. Making meaningful inferences about magnitudes. *Int J Sports Physiol Perform* 2006;**1**:50–7.