

Effectiveness of Spraino for preventing lateral ankle sprain injuries in indoor sports: a pilot randomised controlled trial with 510 athletes with previous ankle injuries

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Background: Lateral ankle sprains (LASs) are common in indoor sports and high shoe-surface friction is considered a risk factor for non-contact LASs. Spraino is a novel Teflon-patch that is attached to the outside of sports shoes to minimise friction at the lateral edge, which could mitigate the risk of LAS.

Purpose / Aim of Study: We aimed to determine preliminary effectiveness (incidence rate and severity) and safety (harms) of Spraino when used to prevent LAS injury among indoor sport athletes.

Materials and Methods: In this exploratory, parallel-group, two-arm pilot RCT, 510 sub-elite indoor sport athletes with a previous LAS injury were randomly allocated (1:1) to Spraino or “do-as-usual”. Allocation was concealed and the trial was outcome-assessor-blinded. Match and training exposure, LASs and associated time-loss were captured weekly via text messages. Information on harms, fear-of-injury and ankle pain were also documented.

Findings / Results: 480 participants completed the trial, reporting a total of 151 LASs, of which 96 were categorised as non-contact, and 50 as severe. All outcomes favoured Spraino with incidence rate ratios of 0.87 (95% CI, 0.62–1.23) for all LASs; 0.64 (95% CI, 0.42–0.98) for non-contact LASs; and 0.47 (95% CI, 0.25–0.88) for severe LASs. Time-loss per LAS was also lower in the Spraino group (1.8 vs 2.8 weeks, $p=0.014$). Six participants reported minor harms because of Spraino.

Conclusions: Compared to usual care, athletes allocated to Spraino had a reduced risk of LAS injury and reduced time-loss, with only few reports of minor harms. The next step is to test these promising risk reductions in a confirmatory RCT.