

## **The effectiveness of buddy strapping vs splinting for treating proximal interphalangeal joint collateral ligament injuries among athletes**

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Proximal Interphalangeal (PIP) joint injuries are common in ball-handling and other contact sports. Splinting and buddy strapping for PIP joint collateral ligament (CL) injuries are the current conservative treatments with possibly different outcomes. This study was aimed to evaluate the effectiveness of splinting Vs buddy strapping for treating PIP joint CL injuries among athletes. Sixteen athletes aged 16-45 years (females n=4 and males n=12) who have had grade I and II injuries within two weeks were recruited for this study. The range of motion (ROM) of the affected finger, pain and a Quick Disability of the Arm, Shoulder and Hand (Quick DASH) score and Visual Analogue Scale (VAS) were assessed as a pre-test, ongoing test (3<sup>rd</sup> week) and a post-test (6<sup>th</sup> week) after the injury. The ROM of the PIP joint ( $P=0.136$ ) did not show a significant difference between two groups. ROM recovered quicker in buddy strapping (mean values pre-21.25, post-97.25) group than splinting group (mean values pre-35, post-107.8). There were improvements of pain perception without movements (mean pre-5.12 post-1.5) and with movements (mean pre-8, post-3.37) in buddy strapping and pain without movements (mean pre-5.12, post-2.62) and pain with movements (mean pre-7.62, post-3.62) in splinting treatment. Buddy strapping for PIP joint CL injuries has shown significant improvement in hand function recovery ( $P=0.01$ ). The results have shown that the range of motion and pain in both groups recovered gradually over 6 weeks with both treatments and Buddy strapping showed significant speedy recovery among both treatments.

**Keywords:** proximal interphalangeal joint, collateral ligament, buddy straps, splints, visual analog scale and range of motion

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