

## Evaluating PIPJ Reconstruction Outcomes Post-Trauma with Ex-Fix: A Retrospective Study from Our New Plastic Surgery Unit, Salford, UK

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### Abstract:

**Background:** Proximal interphalangeal joint (PIPJ) injuries significantly impact hand function. This study evaluates the outcomes of PIPJ reconstruction in our new plastic surgery unit compared to current standards.

**Methods:** A retrospective review of five patients (3 males, 2 females, aged 26-60) with closed finger trauma due to falls, twists, or impacts was conducted. Surgical intervention occurred within days post-injury, followed by physiotherapy to restore range of motion (ROM) in the metacarpophalangeal (MCPJ), PIPJ, and distal interphalangeal (DIPJ) joints. The average follow-up with hand therapy was 5.4 months.

**Results:** One patient discontinued therapy after four months, achieving full ROM. Another was lost to follow-up. A third showed moderate improvement in ROM after three months. The fourth completed four months of therapy, achieving full MCPJ and DIPJ ROM and nearly full PIPJ ROM. After 12 months, the fifth demonstrated significant improvement, achieving full MCPJ extension and substantial PIPJ and DIPJ flexion.

**Conclusion:** Successful PIPJ reconstruction targets near-full ROM (0-110° flexion). Our results suggest that with adequate physiotherapy, patients can achieve outcomes comparable to current standards, emphasizing the importance of personalized rehabilitation strategies.

### Keywords:

Proximal interphalangeal joint (PIPJ), Hand function, PIPJ reconstruction, Range of motion (ROM), Physiotherapy, Closed finger trauma, Rehabilitation strategies.