**Wolfe T, Chu JY, Woods T, and Lubahn JD. A Systematic Review of Postoperative Hand Therapy Management of Basal Joint Arthritis. Clin Orthop Relat Res 2014;472:1190–1197. PMID:** **24249530**

**Reviewer:** Linda Metzger 2-23-16

**Design:** Systematic Review (No meta-analysis)

**Objective:** To identify, compare, and evaluate postoperative therapy protocols used after basal joint arthritis surgery. Specific purposes included: 1) To determine whether differences in the length and type of postoperative immobilization affect clinical results, (2) To compare specific therapy protocols that were prescribed, and (3) To evaluate protocols to determine when patients were released to full activity to see whether these affected clinical results.

**Summary of Results:**

* Included a total of 19 studies published before May 2013 with 1170 participants.
* All 19 studies described a period of postoperative immobilization of the basal joint in either a splint or a cast. Duration of postoperative immobilization varied depending on technique and surgeon preference. In studies (11) in which patients underwent trapeziectomy followed by either tendon interposition or ligament reconstruction, the duration of splinting or casting ranged from 4 to 8 weeks. If a Kirschner wire was used (4 studies), patients were typically casted or splinted at least until the wire was removed at about 4 to 5 weeks after surgery. For the studies (6) in which a joint prosthesis was implanted, postoperative immobilization time ranged from 2 to 6 weeks. Because of the variability in both immobilization protocols and surgical techniques, no clear conclusions could be drawn related to the clinical efficacy of the various types and duration of immobilization.
* All 19 studies described postoperative thumb exercise protocols that were quite variable. Some patients were just shown exercises after the immobilization was discontinued (7 studies). Patients in 6 studies were referred to a therapist after immobilization. Some patients were only referred to a therapist if it was felt they were not making satisfactory progress during follow-up visits (4 studies). Because of the variability in surgical techniques and therapy protocols used, no clear conclusions could be drawn in terms of the clinical efficacy of the various therapy protocols used.
* Time for return to full unrestricted activity was only mentioned in five of the 19 studies. The range for time to return to full activity was 5 to 12 weeks in these studies. Because of the limited number of studies that discussed return to full activity, and the variability among them, no conclusions regarding differences in return to full activity after surgery for basal joint arthritis could be drawn.
* In 7 studies comparing different surgical techniques, most physicians did not vary postoperative immobilization and therapy protocols based on the type of surgery.
* Because of the variability in immobilization and therapy protocols, and surgical techniques, the authors were unable to draw any definite conclusions regarding optimal postoperative immobilization or therapy protocols, and the length of time before patients can return to unrestricted activity after surgery for basal joint arthritis.
* Overall, there is inconclusive insufficient evidence that one postoperative immobilization or therapy regimen is more effective than another, and limited, inconclusive evidence on what the optimal length of time is before patients can return to unrestricted activity after surgery for basal joint arthritis.

**Reasons not to Cite as Evidence:**

* Of the 19 included studies, none were meta-analyses, only 4 studies were larger (>25 in each group) randomized controlled trials (RCTs), and 2 were small RCTs (<25 in each group). The other 13 studies were nonrandomized prospective trials, cohort studies, or non-controlled clinical series or descriptive studies that would not meet our literature critique criteria or qualify for an evidence statement.
* The authors performed a complete literature search on this topic representing all the available evidence, but few high quality RCTs could be found.
* The risk of bias and overall quality of the evidence in the studies was not addressed by the authors. This is a poor quality systematic review that did not even attempt to access the methodological quality of the included studies. Because of this deficiency, this review would not qualify for an evidence statement.
* The authors could not draw any conclusions from this review, so we are unable to conclude if any postoperative immobilization or therapy protocols are better than another, or recommend the optimal length of time before patients can return to unrestricted activity after surgery for basal joint arthritis. No useful conclusions can be drawn from this review, and thus no evidence recommendations can be made.

**Assessment:**

* Low quality, inadequate systematic review that shows there is an absence of evidence for recommending any specific postoperative immobilization or therapy protocols or recommending the optimal length of time before patients can return to unrestricted activity after surgery for basal joint arthritis.