

## Does Total Hip Arthroplasty for Femoral Neck Fractures Do as Well as for Elective Total Hip Arthroplasty?

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**Purpose:** Total hip arthroplasty (THA) is an increasingly performed, highly cost-effective surgery and remains a viable treatment for patients with displaced femoral neck fractures, particularly when weighing patient age, function, and quality of life. Despite the establishment of treatment recommendations, there remains a paucity of literature on these patients' outcomes postoperatively. The current study evaluates and compares patient-reported outcomes, particularly postoperative function and pain, among patients undergoing THA for elective and traumatic indications. The null hypothesis is that there will be no differences in patient-reported outcomes with respect to indication for the procedure.

**Methods:** From January 1, 2015 to December 1, 2018, patients who underwent THA were evaluated with a minimum of 12 months of follow-up. Patients were separated into 2 cohorts based upon the indication for surgery—displaced femoral neck fracture and routine osteoarthritis. Postoperative protocols were similar for both groups. Demographic variables including age, gender, race, insurance status, relevant radiographs, medical comorbidities, and relevant laboratory findings were reviewed. Patient outcomes were tracked via prospective visual analog scale (VAS) pain scores, Patient-Reported Outcomes Measurement Information System (PROMIS) scores, and perioperative complications (blood loss and need for revision surgery).

**Results:** A total of 217 patients met inclusion criteria for this study. 57 patients underwent THA for displaced femoral neck fracture and 160 patients underwent THA for routine osteoarthritis. The fracture cohort was significantly older, had a lower body mass index (BMI), contained more females, and had a higher Charleston comorbidity index ( $P < 0.01$ ) than the elective cohort. There were no significant differences in surgical approach, implant style used, or revisions/complications. The fracture cohort did have a significantly higher operative blood loss ( $P < 0.01$ ). Analysis of PROMIS data revealed that patients undergoing THA for elective indications reported greater levels of function at all time points ( $P < 0.01$ ) and reported less pain interference at both 6 weeks and 6 months postoperatively ( $P < 0.01$ ) when compared to the fracture cohort. Pain interference for both groups was similar at 1 year postoperatively ( $P = 0.20$ ). Patients undergoing THA for elective indications also reported less depressive symptoms at all time points ( $P < 0.01$ ).

**Conclusion:** While the majority of THAs are performed for routine osteoarthritis, active patients sustaining displaced femoral neck fractures may meet indications for THA. This study reveals that patients undergoing THA for routine osteoarthritis report improved functional outcomes and decreased pain interference compared to patients undergoing THA for fractures. These findings are very relevant to the field of orthopaedic surgery, as they highlight the need for improvement regarding this commonly performed surgery in this unique but growing subset of patients.