

How Long Does It Take to Achieve Substantial Clinical Benefit Following Primary Total Hip Arthroplasty?

Christopher N Carender, Zhaorui Wang, Brian Richard Hallstrom, Elizabeth Ann Dailey, Andrew G Urquhart, Michael Maher Kheir

INTRODUCTION: Recent studies have focused on achievement of minimal clinically important difference (MCID) following primary total hip arthroplasty (THA); however, contemporary practice demands an understanding of patient recovery following primary THA in the context of substantial clinical benefit (SCB). The purpose of this study was to determine how long it takes achieve SCB following primary THA and to establish rates of SCB achievement at regular time intervals in the first year following primary THA.

METHODS: We identified 3,307 primary THAs performed in 2,939 patients from August 1, 2015, to July 21, 2023, at a single tertiary care academic institution. Hip Disability and Osteoarthritis Outcome Score for Joint Replacement (HOOS JR) scores were collected preoperatively and at 2 weeks, 3 months, 6 months, and 1 year postoperatively. Mean age at surgery was 64 years, mean BMI was 29 kg/m², and 53% were female. SCB was defined as an increase of at least 22 points in HOOS, JR following primary THA.

RESULTS: The median time to SCB achievement was 64 days (IQR, 44 to 305 days). Cumulative rates of SCB achievement were 1% at 2 weeks, 62% at 3 months, 66% at 6 months, and 88% at 1 year postoperatively. Six percent of patients that achieved SCB prior to 1 year postoperatively “regressed” and failed to achieve SCB at 1 year postoperatively. Of patients that failed to achieve SCB at 2 weeks, 3 months, and 6 months postoperatively, 88%, 69%, and 66% went on to achieve SCB at 1 year postoperatively, respectively.

DISCUSSION AND CONCLUSION: A majority of patients achieved SCB within 2-3 months following primary THA; however, 6% of patients “regressed” and failed to achieve SCB at 1-year postoperatively. These data may be used to guide patient care, patient counseling, and to judge potential process and care improvements.