

Lower Extremity Total Joint Arthroplasty Results in a High Rate of Return to Work Within One Year in Workers' Compensation Cases

Abstract

Introduction: Patients receiving workers' compensation for total joint arthroplasty (TJA) often experience poorer postoperative outcomes than non-workers' compensation patients. This study evaluated return-to-work (RTW) following surgery in this population and compared outcomes between robotic versus manual total joint replacements.

Methods: An institutional billing database was utilized to identify 132 primary TJA cases. Demographics, medical comorbidities, patient-reported outcomes, postoperative complications, and RTW data were retrospectively reviewed. Surgical cases were divided based on the use of robotic assistance and type of occupation. Statistical analyses were conducted in Microsoft Excel, with statistical significance set to $p < .05$.

Results: There were no significant demographic differences between robotic versus manual cases with respect to sex, body mass index, and age. Among patients undergoing total knee arthroplasty (TKA), average RTW time was 210 days for manual and 274 days for robotic procedures, while total hip arthroplasty (THA) patients returned at a mean of 137 and 190 days, respectively. In the full cohort, 13 of 105 (12%) TKA patients and two of 27 (7%) THA patients did not return to work. Only one patient (.01%) had a complication within the first 90 days postoperatively requiring reoperation.

Discussion/Conclusion: Among all lower extremity TJA patients, 88% returned to work at an average time of 233 days. Robotic assisted versus manual surgery status was not significantly correlated with time to return to work. RTW largely depended on the occupational physical demands, with sedentary workers returning earliest. Findings are limited by a single institution's dataset and the inability to account for external factors affecting RTW such as retirement, non-joint related injury, or illness. Future work should examine RTW times prospectively in robotic versus manual cohorts, both in the setting of workers' compensation and the general population.

Table 1. Demographics Among Workers' Compensation Patients Undergoing Robotic Versus Manual Primary Total Joint Arthroplasty

Variable	Manual (n=88)	Robotic (n=42)
Female, n (%)	28 (31.8%)	11 (26.2%)
Male, n (%)	60 (68.2%)	31 (73.8%)
BMI (kg/m²)	34.95	33.66
Age (years)	54.0	56.6
Age Score	1.19 ± 1.11	1.57 ± 1.16
Return to Work (days)	197.8 ± 142.2	246.0 ± 180.6

Table 2. Job Types Among Workers' Compensation Patients Undergoing Robotic Versus Manual Primary Total Joint Arthroplasty

Job Type	Manual	Robotic	Total
Manual Labor	56	22	78
Sedentary	9	5	14
Driver	21	16	37
Not Working	2	1	3