

## **Is the Second TKA Easier? Evaluation of Postoperative Pain and Outcomes In Patients Undergoing Staged Bilateral TKA Within Two Years**

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**INTRODUCTION:** Staged bilateral total knee arthroplasty (TKA) mitigates perioperative risk versus simultaneous, yet paired data comparing pain and opioid utilization between the stages are limited. We compared early and late opioid use, pain scores, length of stay (LOS), and short-term function after the first and second TKA performed within two years, and whether the interval between operations modified these outcomes.

**METHODS:** This was a retrospective cohort study of 1,709 patients (63% female, mean age 67 years, BMI 33) who underwent staged bilateral TKAs from 2016-2022. Patients with preoperative opioid/benzodiazepine use, concurrent orthopedic procedures within 90 days, or discharge to rehabilitation were excluded. Demographics, LOS, opioid usage in morphine milligram equivalents (MME), and PROMs (KOOS JR, NRS pain) were collected.

**RESULTS:** Mean in-hospital NRS pain scores were marginally higher following the second TKA (3.2 vs 3.1,  $p=0.02$ ). MME in the first 24 hours rose (median 45.0 vs 37.5,  $p<0.01$ ), but 24-48 hour (60.0 vs 52.5,  $p=0.01$ ) and total cumulative in hospital exposure (157.5 vs 142.5,  $p<0.01$ ) fell in the second. LOS shortened following the second TKA (71 vs 65 hours,  $p<0.01$ ). Discharge prescription MME were equivalent, median 90-day refill MME was higher after the second TKA (478 vs 315,  $p<0.01$ ), yet total cumulative MME from 0–90 days did not differ ( $p = 0.19$ ). Preoperative KOOS JR was higher before the second TKA (52.5 vs 47.5,  $p<0.01$ ), with lower scores at 6 week postoperatively (63.8 vs 61.6,  $p<0.01$ ) and a smaller delta of improvement (16.1 vs 7.9,  $p<0.01$ ). Length of intersurgery interval showed no correlation with LOS, total MME, or functional outcomes.

**DISCUSSION AND CONCLUSION:** In this paired cohort, pain, LOS, opioid requirements and early functional recovery were clinically similar between the first and second staged TKAs. Prior experience with recovery in a staged setting did not necessarily make the second TKA “easier.”