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Titel des Beitrags: Brake response time is significantly impaired after total knee arthroplasty: investigation of performing an emergency stop while driving a car.

Abstract: The objective of this study was to investigate whether total knee arthroplasty (TKA) impairs the ability to perform an emergency stop. An automatic transmission brake simulator was developed to evaluate total brake response time. A prospective repeated-measures design was used. Forty patients (20 left/20 right) were measured 8 days and 6, 12, and 52 wks after surgery. Eight days postoperative total brake response time increased significantly by 30% in right TKA and insignificantly by 2% in left TKA. Brake force significantly decreased by 35% in right TKA and by 25% in left TKA during this period. Baseline values were reached at week 12 in right TKA; the impairment of outcome measures, however, was no longer significant at week 6 compared with preoperative values. Total brake response time and brake force in left TKA fell below baseline values at weeks 6 and 12. Brake force in left TKA was the only outcome measure significantly impaired 8 days postoperatively. This study highlights that categorical statements cannot be provided. This study’s findings on automatic transmission driving suggest that right TKA patients may resume driving 6 wks postoperatively. Fitness to drive in left TKA is not fully recovered 8 days postoperatively. If testing is not available, patients should refrain from driving until they return from rehabilitation.