

**Title:** Physical function following TKA compared to age matched healthy controls

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**Purpose:** to explore whether physical and functional impairments exist in those who have undergone primary TKA compared to age matched healthy controls.

**Relevance:** Many studies have suggested that although function generally improves following TKA, patients continue to experience significant functional limitations. Most of these studies however have assessed function using self-reported measures despite recommendations that both self-report and performance based measures are required to capture the full spectrum of functional ability. Furthermore, there have been no recent studies that have comprehensively compared outcomes in TKA with those who have no knee related pathology. Therefore, the evidence to suggest that functional limitations persist cannot be considered as robust.

**Participants:** A group of patients (n = 15) were recruited who had undergone primary TKA for osteoarthritis between 10 and 14 months previously (median age = 71 years). A group of age matched health controls (n = 12, median age = 69.5 years) were recruited from local community groups.

**Methods:** Self reported function (0-100 scale where 0 is best), timed-up-and-go, stair ascent/descent, walking speed, leg extensor power and range of motion were compared between groups.

**Analysis:** Mann-Whitney U-tests were used to detect inter-group differences. The alpha level was set at 0.05.

**Results:** Maximum flexion in the TKA group (median = 110°) was significantly less (p = 0.002) than the control group (median = 120°). The TKA group reported significantly worse function (median scores TKA = 10.0, control = 0.00, p = 0.028). No significant differences (p >0.05) however were found between groups in any of the performance based measures of function (timed up and go, timed stair ascent/descent, walking speed) or in knee extensor strength.

**Conclusions:** although individuals with TKA perceived their functional ability to be significantly worse than their healthy counterparts, there was no evidence to suggest that significant functional impairments existed in this small group.

**Implications:** expectations of outcome in TKA have been shown to be an important factor in overall patient satisfaction with their surgery. The results of this study could help to provide improved information regarding functional ability following TKA.

**Keywords:** TKA, outcome, function

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