

Outcomes in Lower Limb Amputation Following Trauma: A Systematic Review and Meta-Analysis

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Background: Lower limb amputation (LLA) is life-changing surgery. Shorter residual limbs are known to place greater physiological strain on patients than longer residual limbs; however, there is ongoing debate as to whether through-knee amputations are preferable to above-knee amputations.

Objectives: This analysis aims to resolve this question by systematically collecting and pooling published and unpublished data on amputees following trauma.

Criteria for selecting studies for this review:

- **Types of studies:** Outcome studies of patients with lower limb amputations following trauma.
- **Types of participants:** below-knee amputation (BKA), through-knee amputation (TKA), above-knee amputation (AKA) and bilateral amputation.
- **Types of interventions:** Patients were divided, according to amputation height, into four groups: (BKA), (TKA), (AKA), and bilateral amputation.
- **Types of outcome measures:** The primary outcome measure was Physical Component Score (PCS) of the shortform- 36 measure of quality of life and secondary outcomes were pain, employment, ability to walk 500 m and proportion of time that prosthesis is worn.

Search strategy for identification of studies: An exhaustive search of Medline, Embase and Recal databases.

Conclusion: This study describes the impact of LLA of different levels on patients' lives. The results indicate that patients with a TKA have a better physical quality of life than those with an AKA and, therefore, support the surgical strategy of maintaining maximum length and performing TKA in preference to AKA, where possible.