To Walk or Not to Walk Again after Major Limb Amputation: A Review of the Possible Progression to a Functional Prosthetic Limbs Use

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Introduction

Outcomes after major amputation are well reported in terms of mortality and financial cost. Despite the availability of good standard of care, some diabetic foot complications do unfortunately progress to major amputation.

Aim of this study was to review our patient outcomes following major amputation with regards to their progression to functional prosthetic limb use.

Methodology

- **Study design:** Retrospective cohort analysis
- Reviewed 34 diabetic patients who underwent major amputation within our Trust in South-East London between 2023-2025.
- **Data Extraction:** The data was extracted from electronic records of theatre procedures, analysed for baseline demographics, clinical notes were reviewed by the regional prosthetics team.

Map of London and South-East London

Results

- 62% had a review with AHP (Allied Health Professional) Amputee consultant prior to amputation.

The **SIGAM Mobility Grade** is a clinical assessment tool developed by the Special Interest Group in Amputee Medicine is used to classify the mobility of people using a prosthetic limb.

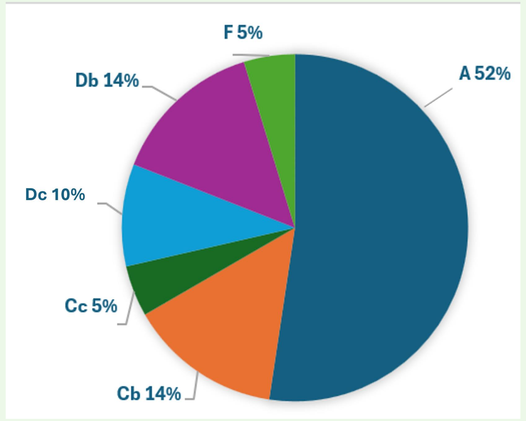
It consists of **six grades (A–F)** based on a 21-item questionnaire, assessing factors such as walking ability, walking distance, use of mobility aids, and the ability to manage different terrains and weather conditions.

- 38% had rehabilitation in Amputee Rehab Unit (ARU)
- 32% had rehabilitation in the community
- 15% had rehabilitation as an outpatient
- 53% met the prosthetics assessment criteria
- 4 moved out of area.

Table 1 Demographics

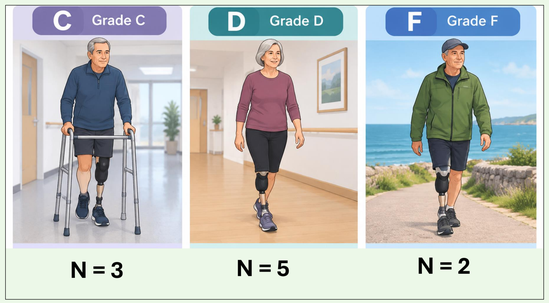
	Percentage Mean
Age (Years ±SD)	61±14
Sex (%male)	75%
Diabetes (% T2DM)	79%
Amputation type	24% AKA
	76% BKA

SIGAM Percentage at Baseline Assessment



SIGAM at one year follow up

A total of 10 patients had prosthesis :



Grade A (non-functional use) to Grade F(normal or near-normal independent ambulation), based on an individual's walking ability. To Grade F(normal or near-normal independent ambulation), based on an individual's walking ability.

Table 2 The SIGAM classification

Grade	Description
A	No use for limb/cosmetic use only
B	Transferring and short distances only
Ca	Walking indoors aided with a frame
Cb	Walking indoors aided with 2 sticks/crutches
Cc	Walking indoors aided with one stick/crutch
Db	Walking outdoors aided with 2 sticks or crutches
Dc	Walking outdoors
E	Occasional use of walking aid
F	Walking anywhere in any weather without a walking aid

Conclusion

Given the low rate of progression to a functional prosthetic limb use after major amputation,, more focus is perhaps needed to address maintenance of core body strength whilst managing patients with diabetic foot complications.

Reference
Table 2: The SIGAM mobility grades: a new population-specific measure for lower limb amputees - PubMed
Figure 1: Lower Limb Prosthesis - What You Need to Know