

Exercise and Physical Activity Interventions for People with Lower Limb Amputations: A Scoping Review

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Background & Objectives

Background: People with lower limb amputations (LLA) have reduced mobility & physical activity and are at high risk for cardiovascular events

Exercise and physical activity has potential to improve quality of life and decrease cardiovascular risk factors

Objective: To examine what is known about exercise and physical activity interventions delivered in outpatient and community-based settings for people with lower limb amputations



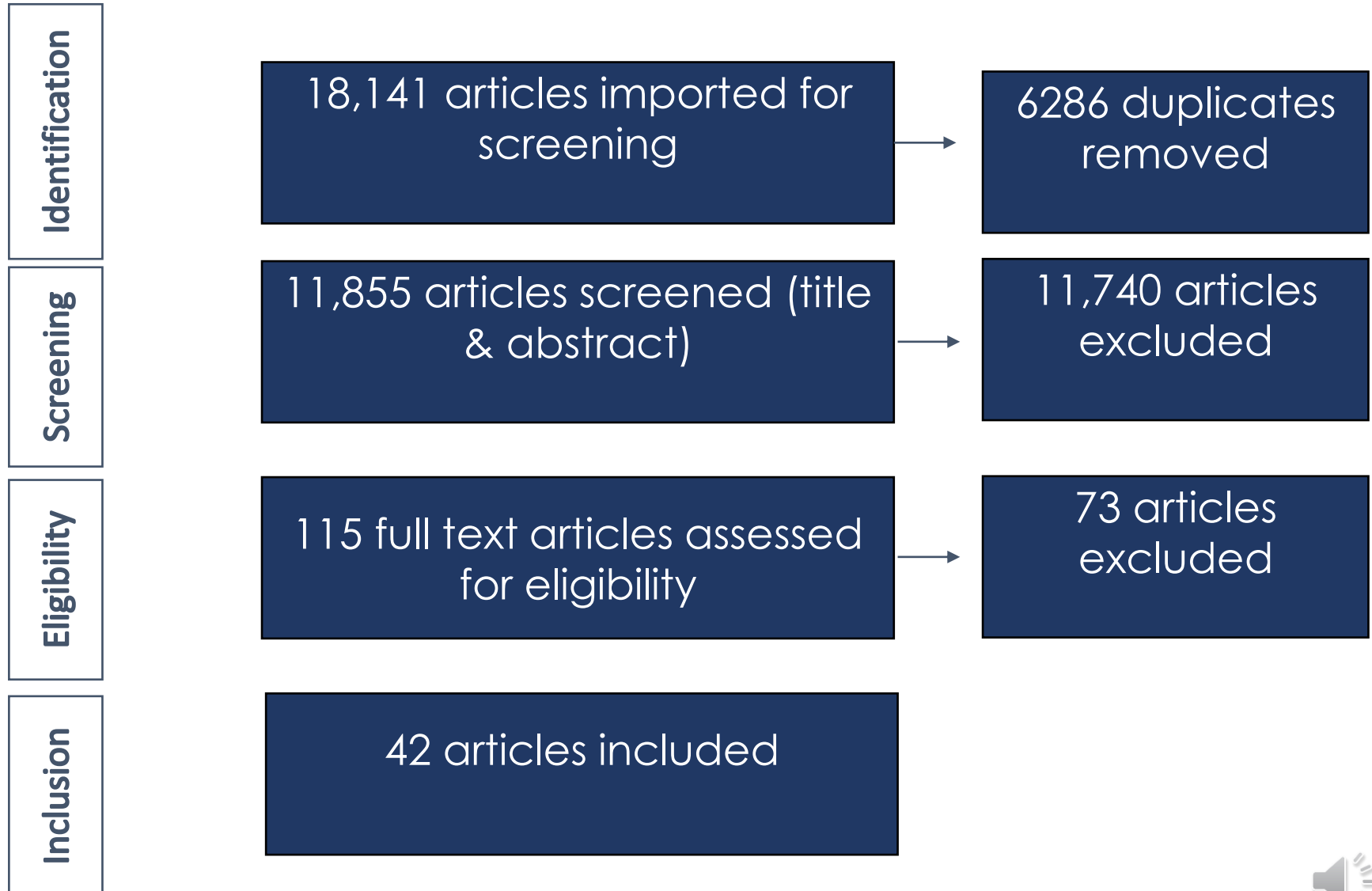
Methods

Flow Chart for Study Selection

Scoping review

Criteria: physical activity and/or exercise interventions for people with LLA, ≥ 18 years, living in a community setting, English

Two reviewers screened articles



Results

- **16 RCTs** (2 articles on 1 trial)
- **2 non-LLA control**
- **13 pre-test post-test design**
- **10 cases studies**

Total participants (range)	N=881 (1-154)
Sex	71% male
Mean age	<ul style="list-style-type: none">• < age 50 in 19 studies• age 51-65 in 16 studies• > age 65 in 5 studies
Cause of amputation	<ul style="list-style-type: none">• Trauma 28• Dysvascular 19• Cancer 11
Level of amputation	<ul style="list-style-type: none">• >50% transtibial 18• >50% Transfemoral 15

Exercise Interventions



Strength Training (19)



Balance (17)



Arm or leg ergometry (13)

Outcome Measures:

- Gait parameters (16)
- Aerobic capacity (12)
- Functional Performance (12)
- Walking endurance (11)
- Balance (9)
- Strength (7)





Conclusions

- Exercise/physical activity interventions not widely studied using experimental designs
- Small sample sizes
- Few women, dysvascular participants
- Heterogeneity in exercise programs: often short duration (< 5 weeks) & minimal aerobic training

