

Motivations & Barriers to Participation in Exercise & Sport: A review of the literature Sarah Deans, MSc

The National Centre PROSTHETICS and ORTHOTICS





BACKGROUND

SPEEAD - Sporting Prosthetics for Everyday & Elite Athletes with a Disability







AIMS & OBJECTIVES

Physical Activity in the Amputee Population

Motivations and Barriers

Critical Relevance



METHODOLOGY

Databases

Search Strategy

Studies considered

Review methods

SUBJECT HEADINGS & KEYWORDS

Amputation, amputee, amput*, prosthe*

Sports, exercise, physical activity, exercise therapy, physical training, physical fitness

Motivation, self efficacy, self esteem, attitude, self concept, participation, motiv*



METHODOLOGY Screening

Inclusion Criteria

Acquired or congenital amputation Peer reviewed journals Written or translated into **English** No limits on publication year No limits on participant numbers

Exclusion Criteria

Mixed populations

Studies which reported swimming without prosthesis

Newsletter articles



RESULTS

Keyword search n=503

Duplicates removed n=361

Articles meeting inclusion criteria n=19

Thematic Groups

Recreation & sports activities

Physical fitness

Physical outcome

Body image, mastery & empowerment

Motivations, barriers, physical activity, sports



DISCUSSION

- **Kegel, 1980.** Recreational activities of lower extremity amputees: a survey. *Archives of Physical Medicine & Rehabilitation,* 61: 258 264
- **Rubin & Fleiss, 1983.** Devices to enable persons with amputation to participate in sports. *Archives of Physical Medicine & Rehabilitation,* 64 (1): 37-41
- Harney, 1995. Amputees in athletic sports. *Physiotherapy in Sport*, 18 (3): 6-7
- Webster, Levy, Bryant, Prusakowski, 2001. Sports and recreation for persons with limb deficiency. *Archives of Physical Medicine & Rehabilitation*, 82 (3): S38-44



- Munin, Espejo-De Guzman, Boninger, Fitzgerald, Penrod, Singh, 2001. Predictive factors for successful early prosthetic ambulation among lower limb amputees. Journal of Rehabilitation, Research & Development, 38 (4): 379-384
- **Nehler, et al, 2003.** Functional outcome in a contemporary series of major lower extremity amputations. *Journal of Vascular Surgery*
- **Trantowski-Farrell & Pinzur, 2003.** A preliminary comparison of function and outcome in patients with diabetic vascular dysvascular disease. *Journal of Prosthetics & Orthotics*



DISCUSSION

- 10 participants with traumatic amputation
- Motivations universal & unique benefits
- Barriers physical, psychosocial, societal

Berbrayer, 2004. Motivations & barriers to sports participation for adults amputees. *American Journal of Physical Medicine* & *Rehabilitation.* 83 (3): p232-232



CONCLUSIONS

Younger people with traumatic amputation are generally involved in sports.

How do we empower the older person with amputation and co-morbidity to participate in physical activity, exercise and sports?

Let research on the 'normal' population inspire and inform us.





Scottish Physical Activity Research Collaboration

http://www.sparcoll.org.uk



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www.strath.ac.uk/prosthetics/research/speeadsportingprosthetics



