

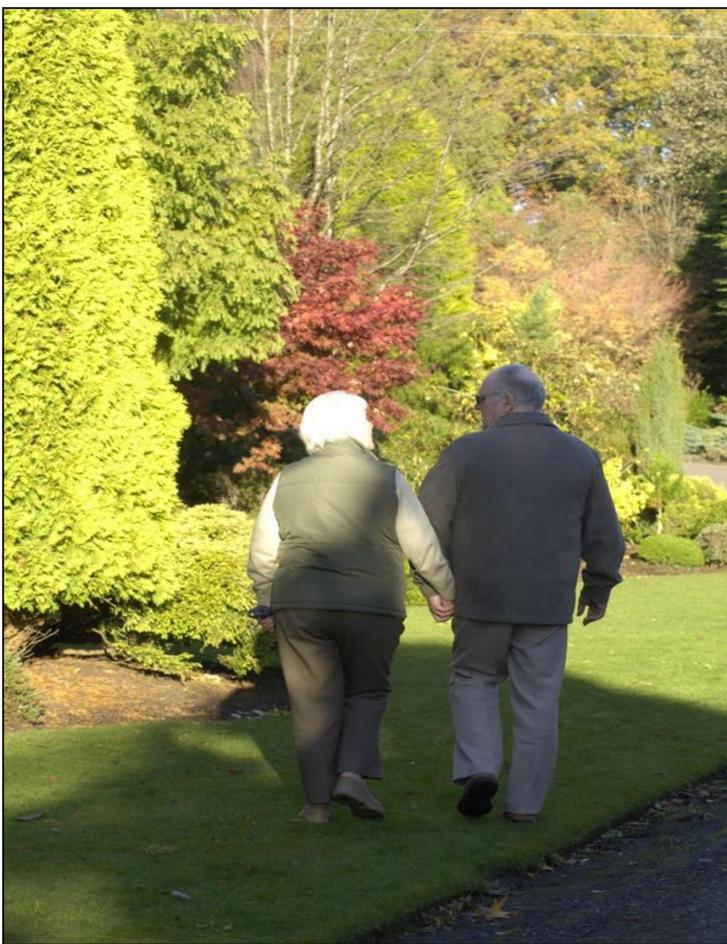
## Motivations & Barriers to Participation in Physical Activity, Exercise & Sport: A review of the literature.

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### Background

The author has a fundamental belief that rehabilitation engineering research be based on the thoughts and feelings of the person with limb absence and what *they* think their desired outcomes should be.

Participation in supervised group sessions can lead to physiological and physical benefits for normal and special populations alike.<sup>1</sup> Studies of people with breast cancer, cardiovascular disease and osteoarthritis have meant these populations have benefitted from health improvements brought about by physical activity consultation and participation programmes.<sup>2</sup>



This raised the following question:

**COULD THE SAME PRINCIPLES BE APPLIED TO A POPULATION WITH LIMB ABSENCE RESULTING IN SIMILAR HEALTH BENEFITS?**

A review of the literature was carried out to determine the state of the science. There were three specific objectives; to determine the studies which examined physical activity in the limb absent population; to examine which of these studies addressed motivations and barriers to participation in physical activity; and to ascertain which of these studies had critical relevance.

<sup>1</sup> Murphy et al (2002) **Accumulating brisk walking for fitness, cardiovascular risk and psychological health.** *Medicine & Science in Sport and Exercise*, 34:9, 1468-1474  
<sup>2</sup> Mutrie et al (2007) **Benefits of supervised group exercise programme for women being treated for early stage breast cancer: pragmatic randomised controlled trial.** *British Medical Journal*, 334 (7592), 517

### The Literature Review

#### SUBJECT HEADINGS & KEYWORDS

- Amputation, amputee, amput\*, prosth\*
- Sports, exercise, physical activity, exercise therapy, physical training, physical fitness
- Motivation, self efficacy, self esteem, attitude, self concept, participation, motiv\*

503 articles were identified from six bibliographic databases and the duplicate papers removed. Once inclusion and exclusion had been applied, 19 papers presented in five clear thematic groups.

#### THEMATIC GROUPS

1. Recreation & sports activities
2. Physical fitness
3. Functional outcome
4. Body image, mastery and empowerment
5. Motivations and barriers, physical activity & sport



One key author studied 10 people who had sustained traumatic amputation of either upper and lower limbs. Several motivations and barriers to participation in physical activity were identified.

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

Motivations	Barriers
•Health benefits	•Physical (stump pain)
•Social interaction	•Psychosocial
•Stress relief	(embarrassment)
•Self esteem	•Societal (work hours
•Body image	& cost)

### Findings and Future Work

The able-bodied population finds it challenging to be more active. This can only be compounded by the *perceived* additional barriers people who use a prosthesis may have. With a limited literature base on the subject of physical activity, ongoing work is investigating the concepts raised by Berbrayer in the Scottish limb absent population who have peripheral arterial disease. Thus, the author is researching the subsequent question:

**CAN GROUP EXERCISE and PHYSICAL ACTIVITY CONSULTATION INTERVENTIONS ELICIT CHANGES in ATTITUDES and BEHAVIOURS in those with LOWER LIMB ABSENCE?**