Anna Lucia Barker, Int J Phys Med Rehabil 2014, 2:4
http://dx.doi.org/10.4172/2329-9096.S1.008

OMICS Group Conferences
Accelerating Scientific Discovery

2nd International Conference and Exhibition on
Physical Medicine & Rehabilitation
July 14-16, 2014 DoubleTree by Hilton Baltimore-BWI Airport, USA

Effectiveness of aquatic exercise for musculoskeletal conditions: A meta-analysis

Anna Lucia Barker
Monash University, Australia

Musculoskeletal conditions are among the world's leading causes of chronic pain, disability and reduced health-related quality of life. Evidence suggests aquatic exercise can decrease this disease burden. This review aimed to investigate the effectiveness of aquatic exercise in the management of musculoskeletal conditions. Ovid MEDLINE, CINAHL, EMBASE, and The Cochrane Central Register of Controlled Trials were searched for randomized and quasi-randomized controlled trials evaluating aquatic exercise for adults with musculoskeletal conditions compared to no exercise or land-based exercise. Outcomes of interest were pain, physical function and quality of life. The electronic search identified 1199 potential studies. Of these, 26 studies were included in this review. Twenty studies were identified as high methodologic quality (PEDro score ≥6). Compared to no exercise, aquatic exercise achieved moderate improvements in pain (SMD -0.37, 95% CI -0.56 to -0.18), physical function (SMD 0.32, 95% CI 0.13 to 0.51) and quality of life (SMD 0.39, 95% CI 0.06 to 0.73). No significant differences were observed between the effects of aquatic and land-based exercise on pain (SMD -0.11, 95% CI -0.27 to 0.04), physical function (SMD -0.03, 95% CI -0.19 to 0.12) or quality of life (SMD -0.10, 95% CI -0.29 to 0.09). The evidence suggests that aquatic exercise has moderate beneficial effects on pain, physical function and quality of life in adults with musculoskeletal conditions. These benefits appear comparable across conditions and with those achieved with land-based exercise. Further research is needed to understand the characteristics of aquatic exercise programs that provide the most benefit.

Biography

Anna Lucia Barker is a senior research fellow and leader of the Falls and Bone Health team at Monash University. She is a physiotherapist and an experienced falls prevention researcher, and has developed a strong interest in the management of older people having completed a Masters in Geriatrics and a PhD on falls. She led the world's largest falls prevention trial in the hospital setting— the 6-PACK project —and has recently commenced the RESPOND project that explores secondary falls prevention in the ED and the ASPREE fracture sub-study that investigates the effect of aspirin on fracture and fall risk.

Anna.Barker@monash.edu