

# Exercise intervention for chronic pain management, muscle strengthening and functional score in obese patients with chronic musculoskeletal pain: a systematic review and meta analysis / Tirza Z. Tamin, Nyoman Murdana, Yupitri Pitoyo, Eka D. Safitri

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Abstrak

**ABSTRAK**

Background: obesity and osteoarthritis have strong inter-relationship with multi-factorial mechanism that caused pain and leads to decreased quality of life. Exercise has been identified as prevention and management against obesity and joint pain. This systematic review aims to assess the effect between exercises compared to diet group for chronic pain management, physical and mental function in obese patients with chronic musculoskeletal problem. Methods: we performed a systematic search of Randomized Control Trial studies from Cochrane Central Register of Controlled Trials (CENTRAL); MEDLINE; EBSCO; SCIEDIRECT (Elsevier); SCOPUS, grey literature, trial registry, ongoing study for published studies, and from the ClinicalTrial.gov, thesis of rehabilitation medicine in RSCM, and proceeding books for unpublished studies that was last updated on November 2016. Risk of bias was assessed using Cochrane risk-of-bias tool and data were analyzed using Review Manager 2014. Results: one study showed no difference in pain reduction (assessed using VAS) between two groups. Two studies showed improvement in physical function measured using 6MWT in exercise group at 6 and 18 months with mean difference 28.12 [11.20, 45.04] and 26.21 [9.01, 43.41]. There was no significant effects observed for Mental and Physical Function based on SF-36 after 6 months (1 study) and 18 months (2 studies) observation, with mean difference 1.10 [-0.79, 2.99] and 0.08 [-1.53, 1.70] respectively for Mental Function score and -0.30 [-2.54, 1.94] and -0.36 [-2.30, 1.57] respectively for Physical Function score. Conclusion: exercise can improve physical function objectively, but could not reduce pain in obese patients with chronic musculoskeletal problem subjectively.

Keywords: exercises intervention, chronic pain management, functional score, quality of life, systematic review.