

## Exercise and Geriatric Depression: a Scoping Review of the Research Evidence

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**Abstract :** Geriatric depression is a common late-life mental health disorder that increases morbidity and mortality. It has been shown that exercise is effective in alleviating symptoms of geriatric depression. However, inconsistencies across studies and lack of optimal dose-response of exercise for improving geriatric depression have made it challenging to draw solid conclusions on the effectiveness of exercise in late-life depression. Purpose: To further investigate the moderators of the effectiveness of exercise on geriatric depression across the current body of evidence. Methods: Based on the Arksey and O'Malley framework, an extensive search strategy was performed by exploring PubMed, Scopus, Sport Discus, PsycInfo, ERIC, and IBSS without limitations in the time frame. Eight systematic reviews with empirical results that evaluated the effect of exercise on depression among people aged  $\geq 60$  years were identified and their individual studies were screened for inclusion. One additional study was found through the hand searching of reference lists. After full-text screening and applying inclusion and exclusion criteria, 21 studies were retained for inclusion. Results: The review revealed high variability in characteristics of the exercise interventions and outcome measures. Sample characteristics, nature of comparators, main outcome assessment, and baseline severity of depression also varied notably. Mind-body and aerobic exercises were found to significantly reduce geriatric depression. However, results on the relationship between resistance training and improvements in geriatric depression were inconsistent, and results of the intensity-related antidepressant effects of exercise interventions were mixed. Extensive use of self-reported questionnaires for the main outcome assessment and lack of evidence on the relationship between depression severity and observed effects were of the other important highlights of the review. Conclusion: Several literature gaps were found regarding the potential effect modifiers of exercise and geriatric depression. While acknowledging the complexity of establishing recommendations on the exercise variables and geriatric depression, future studies are required to understand the interplay and threshold effect of exercise for treating geriatric depression.

**Keywords :** exercise, geriatric depression, healthy aging, older adults, physical activity intervention, scoping review

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