

Exercise programmes for older people with dementia may have an effect on cognitive function and activities of daily living, but studies give inconsistent results

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Implications for practice and research

- Exercise appears to modestly improve cognition and performance on activities of daily living.
- Family caregivers who supervise home exercise programmes may have reduced burden.
- Clinicians should feel confident in prescribing exercise for persons with dementia.
- Future work should focus on homogenous samples and clear intervention protocols to help define meaningful treatment effects.

Context

The lack of success in phase 3 anti-amyloid trials has increased attention on lifestyle interventions to slow dementia progression and improve function.^{1,2} Exercise intervention trials are difficult and costly, especially in those with dementia,³ thus aggregating findings across trials is a useful method of multiplying the power of small studies. This systematic review sought to determine if well-known benefits of exercise⁴ were also seen in those with dementia. Randomised controlled trials of exercise on important clinical measures, including cognition and activity of daily living performance, and caregiver burden, among others, were assessed.

Methods

The authors identified 16 randomised controlled trials of exercise in older adults with dementia of any type in the extant literature. Trials were required to use standardised diagnostic criteria, but no restriction was placed on the aetiology of dementia. Exercise interventions could be in any combination of structured physical activities beyond standard of care, including aerobic, resistance, balance and flexibility training. Standard

meta-analytic techniques were used to evaluate exercise effect. Results were reported as standardised mean differences (SMD) with 95% CI.

Findings

Exercise appeared to modestly improve cognition (SMD=0.55, 95% CI 0.02 to 1.09), although excluding one trial of those with moderate-to-severe dementia nullified this effect (SMD=0.31, 95% CI -0.11 to 0.74). Exercise also appeared to improve performance on activities of daily living (SMD=0.68, 95% CI 0.08 to 1.27). Caregivers supervising exercise for their loved one reported reduced burden. No significant effect was discovered or there were insufficient data to assess exercise effects on the remaining outcome measures of depression, mortality, quality of life and cost of care. Variability of the results continues to obscure a more definitive interpretation of the data.

Commentary

Forbes *et al* have updated their prior systematic review of exercise effects in individuals with dementia. The intervening 6 years has quadrupled the number of qualifying trials and participants and provided sufficient evidence for meta-analysis. The findings are very encouraging and fit the emerging view that regular physical activity is an essential part of daily life and that adopting a healthy lifestyle benefits those with dementia. Specifically, the present evidence strongly suggests that structured exercise benefits cognition and function in those with dementia and may have benefits for their caregivers.

The results of the present work are particularly important, because they focus on perhaps the two most feared sequelae of dementia: loss of cognitive capacity and loss of independence.⁵ Clinicians and researchers should begin to shift their thinking from 'Do we recommend exercise for our patients with dementia?' to 'How do we best recommend exercise for our patients?' The possibility that exercise benefits cognition, function and mental health can be confidently included in discussions with patients and their caregivers.

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