Aerobic Exercise Sustains Performance of Instrumental Activities of Daily Living in Early-Stage Alzheimer's

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Abstract: Alzheimer's disease (AD) is a debilitating neurodegenerative ailment that causes brain atrophy and memory loss. Individuals with AD experience progressive loss of independence performing instrumental activities of daily living (IADL). IADLs are those actions that allow an individual to function independently, such as maintaining hygiene, managing money and preparing meals. Thus, it is imperative to Identify interventions that support independence, and reduce the economic and psycho-social burden of care giving for individuals with AD. The purpose of this investigation was to examine functional disability and caregiver time in individuals with early-stage AD, and explore if specific exercise regimens could improve these areas. We completed a 26-week trial of aerobic exercise (AEx) vs strength and toning (ST) for patients with early-stage AD. Each AD exercise group was assessed for functional dependence, required caregiver time, and cognition using standard battery assessments before and after their respective exercise regimens. Results showed a stable function in the AEx group compared to significant decline in ST group. This was especially evident in more complex instrumental activities of daily living (such as financial planning). Individuals in the AEx group increased 1% compared to an 8% loss in the ST group over 26 weeks. Negative Changes in memory correlated with declining performance of instrumental activities of daily living for both groups. This analysis extends recent work by revealing specific benefits for instrumental activities of daily living for individuals in the early stages of AD and supports the value of aerobic exercise for individuals with cognitive impairment.

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