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**Impact of physical activity on nursing home placement and mortality in mild Alzheimer's Disease: the Danish Alzheimer's disease Intervention Study (DAISY)**

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**Background:** Several studies have shown that Alzheimer's disease (AD) is associated with increased mortality rates and increased risk of nursing-home placement, compared to age-matched healthy elderly subjects. Several factors, such as comorbidities may be contributing factors. Few studies have investigated whether physical activity may lower the risk of nursing-home placement or mortality rates. In the present study we aimed to investigate whether physical activity may be associated with lower mortality rates and risk of nursing-home placement in patients with mild AD. **Methods:** Data from the Danish Alzheimer's Intervention Study (DAISY) were used. All patients had recently diagnosed mild (MMSE>20) AD. Physical activity level at baseline was assessed by a questionnaire. Proxies rated patients' level of physical activity as either "no physical activity", "less than 4 hours" or "more than 4 hours" per week. Patients were followed for 3 years. Data on all-cause mortality and nursing-home placement were collected. Cox proportional-hazard regression analysis with mortality and nursing-home placement as outcomes and physical activity level as dependent variable was carried out. Covariates were social participation, Charlson Comorbidity Index, ADL function (measured by the Alzheimer's disease cooperative study - Activities of daily living scale) disease-specific Quality of Life (measured by the Quality of Life - Alzheimer's Disease scale) and MMSE at baseline, age and gender. **Results:** In total 327 patients (Age (mean, SD): 76.2,  $\pm$  7.2; gender f/m: 177/151; MMSE (mean, SD): 24.0,  $\pm$  2.6) had data on proxy-rated physical activity levels available, and were included. There were no significant associations between physical activity and mortality or nursing-home placement. Figure 1 shows survival curves for mortality. **Conclusions:** Several factors may contribute to mortality and risk of nursing-home placement in patients with mild AD. Being physically active does not seem to reduce mortality or nursing-home placement.