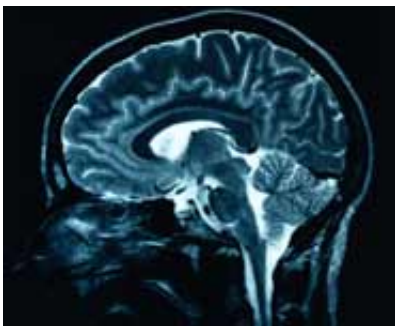


# New study evaluates link between physical activity in middle age and onset of dementia in later life

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(Medical Xpress) -- Dementia and cognitive impairment are important public health issues, due to the morbidity associated with deteriorating memory, and the cost of caring for patients by both families and health services.

Previous studies have suggested that [physical activity](#) may be protective against dementia and [cognitive impairment](#); however results have been conflicting. Many studies in this area have been limited by small sample sizes and short follow-up times.

New research, which aimed to measure the association between physical activity and onset of dementia and cognitive impairment, has found no

association.

The [cohort study](#), published in the [Journal of Alzheimer's Disease](#) and led by academics from the University of Bristol and Cardiff University, analysed data from 1,005 middle-aged, and mostly manual-class, men in order to identify whether physical activity in mid-life is a risk factor for dementia and cognitive impairment.

Using data from The Caerphilly Prospective Study, the researchers carried out analyses using data on levels of leisure-time and work-related physical activity (collected when the men were aged 48-66 years) and cognitive function measured an average 16 years later.

The study's results did not provide any convincing evidence of an association between either leisure-time or work-related physical activity in mid-life and dementia or cognitive impairment in later life.

Dr. Gemma Morgan, lead researcher from Bristol's School of Social and Community Medicine, said: "Although our results show no protective effect of mid-life physical activity for cognitive decline in later life, there is good evidence that physical activity prevents other health problems. It is important that the health benefits of physical activity continue to be promoted by the public health community. However our study suggests that the protective effects on dementia and cognitive impairment may be overly optimistic."

Data presented in this study are from a considerably longer follow-up period than many other studies in this area, and this may partially explain the lack of association. The researchers undertook further analysis of the findings from other published studies, and found that some of the differences in findings could be explained by the different follow-up periods. Studies with shorter follow-up periods were more likely to show a protective association between physical activity and cognitive

impairment compared to studies with longer follow-up periods.

Professor Yoav Ben-Shlomo from Bristol's School of Social and Community Medicine, added: "This study represents an important addition to the literature on physical activity and cognitive disease as few studies have data with more than 15-years follow-up. It is possible that previous studies have shown protective effects due to a tendency for the literature to preferentially publish positive studies and the phenomenon known as "reverse causation". Hence subjects with very early disease, before any clinical diagnosis, reduce physical activity levels as a secondary effect of the disease rather than physical activity itself being protective. We are discovering that the pathology leading to [dementia](#) may have a long latency period before diagnosis so this is a possibility."

An early online version of this paper detailing the findings has been published and is scheduled for publication in the August issue of the *Journal of Alzheimer's Disease*.

**More information:** Physical activity in middle-age and dementia in later life: findings from a prospective cohort of men in Caerphilly, South Wales and a Meta-Analysis by Gemma Morgan, et al. *JAD* Volume 31/Issue 3 (August 2012), [DOI: 10.3233/JAD-2012-112171](https://doi.org/10.3233/JAD-2012-112171)

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