Leisure Activities and the Risk of Dementia
A Systematic Review and Meta-analysis

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Study Question
Is there an association between different types of leisure activity and the incidence of dementia?

What Is Known and What This Paper Adds
Leisure activities are major components of a healthy lifestyle. The results of this investigation show the different leisure activities, including physical activity (PA), cognitive activity (CA), and social activity (SA), are inversely associated with the risk of all-cause dementia (ACD) and its 2 major subtypes, Alzheimer disease (AD) and vascular dementia (VD).

Methods
This is a systematic review and meta-analysis. The investigators searched the Cochrane, PubMed, Embase, and Web of Science databases to identify longitudinal studies published in English that assessed the association of PA, CA, and SA with incident ACD, AD, and VD. Relative risks (RRs) and 95% CI were estimated using random-effects meta-analysis. Subgroup analyses were used to estimate potential effect modifiers.

Results and Study Limitations
A total of 38 longitudinal studies were included in the meta-analysis. These studies had a total of 2,154,818 participants (the average or median age ranged between 45 and 93 years at baseline). During the follow-up (3–44 years), 74,700 participants developed ACD, 2,848 AD, and 1,423 VD. Compared with individuals who did not engage in leisure activities, the pooled RR estimates for ACD, AD, and VD in individuals engaged in leisure activities were 0.83 (95% CI: 0.80–0.87), 0.82 (95% CI: 0.74–0.90), and 0.68 (95% CI: 0.54–0.86), respectively. The subgroup analyses showed that physical (RR = 0.83, [0.78–0.88]), cognitive (RR = 0.77 [0.68–0.87]), and social (RR = 0.93 [0.87–0.99]) activities were inversely associated with the incidence of ACD. In addition, physical (RR = 0.87 [0.78–0.96]) and cognitive (RR = 0.66 [0.52–0.85]) activities were related with a reduced risk of AD. Physical activity (RR = 0.67 [0.53–0.85]) was associated with a lower incidence of VD. A limitation of this study is that the association between leisure activities of different intensity and frequency and the risk of dementia was not analyzed because of the insufficient number of studies. Other limitations include assessing leisure activities with self-reports, potential publication bias, and the limited follow-up duration.

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