Exercise Is Associated with Reduced Risk for Incident Dementia among Persons 65 Years of Age and Older

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FROM ABSTRACT:

Background:
Alzheimer disease and other dementing disorders are major sources of morbidity and mortality in aging societies.

Objective:
To determine whether regular exercise is associated with a reduced risk for dementia and Alzheimer disease.

Design: Prospective cohort study.

Participants:
1740 persons older than age 65 years without cognitive impairment.

Measurements:
Baseline measurements, including exercise frequency, cognitive function, physical function, depression, health conditions, lifestyle characteristics, and other potential risk factors for dementia (for example, apolipoprotein E 4); biennial assessment for dementia.

Results:
During a mean follow-up of 6.2 years, 158 participants developed dementia (107 developed Alzheimer disease). [Scary, this is 9% in 6 years]

The incidence rate of dementia was 13.0 per 1000 person-years for participants who exercised 3 or more times per week compared with 19.7 per 1000 person-years for those who exercised fewer than 3 times per week.

Conclusion:
These results suggest that regular exercise is associated with a delay in onset of dementia and Alzheimer disease, further supporting its value for elderly persons.

THE EDITORS NOTE:

1) Studies suggest that people with high levels of physical activity are less likely to develop dementia.
2) All 1740 participants in this cohort study were 65 years of age or older and were cognitively intact at baseline. Over 6.2 years, the rate of dementia was 13.0 per 1000 person-years in those who exercised 3 or more times per week and 19.7 per 1000 person-years in those who exercised less than 3 times per week.

3) This study adds to the evidence that regular exercise is associated with a lower risk for dementia.

THESE AUTHORS ALSO NOTE:

“Alzheimer disease and other dementing illnesses are major sources of morbidity and mortality that affect millions of persons in the increasingly aging society of the United States.”

“Regular physical exercise is an important element in overall health promotion and might also be an effective strategy to delay onset of dementia.”

A biological basis for how physical exercise might preserve brain function includes improved cerebral blood flow and oxygen delivery.

Reduced loss of hippocampal [memory] brain tissue in the aging brain is related to level of physical fitness.

Physical exercise can enhance cognitive function in older adults.

“Many people regard Alzheimer disease as one of the most dreaded consequences of aging.”

A recent study showed that physical exercise was associated with decreased risk for decline in cognitive function by 42%, decreased Alzheimer disease by 50%, and decreased for any dementia by 37%.

The lifestyle characteristics also assessed in this study were smoking [increased influence], consuming alcohol [increased influence], and taking dietary supplements (including vitamin A, vitamin C, vitamin E, multivitamins, and fish oil supplements) [reduced influence]. None were statistically relevant.

Persons who exercised 3 or more times per week had a higher probability of being dementia-free than those who exercised fewer than 3 times per week.

DISCUSSION

This study found “a reduced incidence rate of dementia for persons who exercised 3 or more times a week (13.0 per 1000 person-years) compared with those who exercised fewer than 3 times per week (19.7 per 1000 person-years).”
In this study, persons who exercised 3 or more times a week had a 32% reduction in risk for dementia compared with those who exercised fewer than 3 times per week.

These researchers found a “better health-related quality of life associated with moderate levels of exercise compared with no exercise or longer duration and higher frequency of exercise.” [Important: regular moderate exercise is the key]

This study suggests “exercise does not prevent dementia but might be associated with a delay in onset.”

These authors note that senior citizens should begin a regular moderate exercise program, even after they start “losing it.”

Three earlier studies also note “modest levels of physical exercise are associated with delayed onset of dementia or Alzheimer disease.”

A conditioning program improves higher-order cognitive functions, including executive function, memory, and visuospatial function. This is important because changes in such higher-order functions are typically the first signs and symptoms of Alzheimer disease, the most common dementing illness.

The hippocampus [memory center] has less tissue loss in older persons at higher levels of physical conditioning.

“Increasing the level of physical activity through habitual exercise also benefits persons with established Alzheimer disease.”

KEY POINTS FROM DAN MURPHY

1) Alzheimer disease and other dementing disorders are major sources of morbidity and mortality in aging societies, and affecting millions of Americans.

2) “Many people regard Alzheimer disease as one of the most dreaded consequences of aging.”

3) Regular exercise is associated with a delay in onset and a lower risk of dementia and Alzheimer disease.

4) People with high levels of physical activity are less likely to develop dementia.

5) Regular physical exercise is an important element in overall health.

6) Physical exercise preserves brain function because it improved cerebral blood flow and oxygen delivery, reducing the loss of hippocampal [memory] tissue.

7) Physical exercise enhances cognitive function in older adults.
8) Persons who exercised 3 or more times per week were more likely to be dementia-free than those who exercised fewer than 3 times per week.

9) These researchers found a “better health-related quality of life associated with moderate levels of exercise compared with no exercise or longer duration and higher frequency of exercise.” [Important: regular moderate exercise is the key]

10) Senior citizens should begin a regular moderate exercise program, even after they start “losing it.”

11) A conditioning program improves higher-order cognitive functions, including executive function, memory, and visuospatial function.

12) “Increasing the level of physical activity through habitual exercise also benefits persons with established Alzheimer disease.”