

UC Irvine

UC Irvine Previously Published Works

Title

Poor Physical Performance Increases the Risk of Dementia in the Oldest-Old

Permalink

<https://escholarship.org/uc/item/86z4z8vq>

Journal

NEUROLOGY, 80

ISSN

0028-3878

Authors

Bullain, Szofia

Corrada, Maria

Kawas, Claudia

Publication Date

2013

Copyright Information

This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

Peer reviewed

Poor Physical Performance Increases the Risk of Dementia in the Oldest-Old (P03.096)

Szofia Bullain, Maria Corrada, Claudia Kawas

First published February 8, 2016,

Abstract

OBJECTIVE: To examine the longitudinal relationship between poor physical performance and risk of dementia in non-demented oldest-old.

BACKGROUND: We have previously reported a strong, dose-dependent cross-sectional relationship between poor physical performance and odds of dementia, where poorer physical performance was associated with increased odds of prevalent dementia.

DESIGN/METHODS: The 90+ Study is a population based investigation of dementia in people aged 90 and older. 594 participants from The 90+ Study were included in this study. Physical performance measures (5 chair-stands, 10-second balance, 4-m walk and handgrip) were scored from 0-4 (0= unable to perform, 4= best performance). The outcome was dementia, diagnosed by applying DSM-IV criteria. Hazard Ratios (HR) for dementia in relation to physical performance were estimated by Cox Regression after adjustment for age and gender.

RESULTS: At baseline, all participants were non-demented (normal: 57%, cognitively impaired non-demented: 43%), mostly women (69%) with an average age of 93.3 (range 90.0-103.0) years. The average length of follow-up was 2.6 (range 0.1-9.0) years. Poor physical performance in all measures was significantly associated with increased risk of incident dementia. HR for every unit decrease in physical performance score were 1.18 for 5 chair-stands, 1.27 for balance, 1.35 for 4-m walk, 1.17 for handgrip (all $p < 0.05$). In a subanalysis that only included participants with normal baseline cognitive status HRs remained unchanged for 5 chair-stand (HR=1.13, $p=0.14$) and balance (HR=1.27 $p=0.004$), but were lower for 4-m walk (HR 1.22 $p=0.04$), and slightly higher for handgrip (HR=1.27 $p=0.004$).

CONCLUSIONS: In this cohort of people over age 90, participants with poor physical performance are at increased risk of developing dementia. Further evaluation is still required to determine if poor physical performance is a modifiable risk factor or merely a different manifestation of the same neurodegenerative process which is detected before cognitive impairment and dementia.

Supported by: NIH T32-NS045540, NIH T32-AG000096, NIH R01-AG21055.

Disclosure: Dr. Bullain has nothing to disclose. Dr. Corrada has nothing to disclose. Dr. Kawas has received personal compensation for activities with Lilly Pharmaceuticals as a member of the Data Monitoring Committee.

Tuesday, March 19 2013, 2:00 pm-6:30 pm