

Determinants of Midlife & Longitudinal Change in Cognitive Function: CARDIA Study

<https://neurodegenerationresearch.eu/survey/determinants-of-midlife-longitudinal-change-in-cognitive-function-cardia-study/>

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Country

USA

Title of project or programme

Determinants of Midlife & Longitudinal Change in Cognitive Function: CARDIA Study

Source of funding information

NIH (NIA)

Total sum awarded (Euro)

€ 2,756,711.93

Start date of award

01/12/2014

Total duration of award in years

3

The project/programme is most relevant to:

Alzheimer's disease & other dementias

Keywords

Coronary Artery Risk Development in Young Adults Study, middle age, cognitive function, cognitive testing, lifestyle factors

Research Abstract

DESCRIPTION (provided by applicant): Almost nothing is known about how exposure to key

risk factors in early life influences cognitive function and its decline later in life. Evidence suggests that the neuropathologic process leading to dementia, especially Alzheimer disease and vascular dementia, begins decades before clinical features become apparent. Recent research has convincingly demonstrated that mid-life risk factors, especially those related to cardiovascular disease and lifestyle factors, have a substantial impact on later life cognition. However, much less is known about earlier, e.g. young adult, risk factors and their effect on cognition in mid-life and later. We propose to address this gap by conducting an innovative ancillary study to the ongoing CARDIA study. CARDIA is a multisite prospective study of 5,115 black and white adults, aged 18-30 years at baseline (1985-86), who recently completed their seventh (year 25) follow-up in which cognitive testing and brain MRIs were measured and who will be participating in a year 30 exam in 2015-16. We propose to repeat and augment the cognitive testing for the year 30 visit on an estimated 3100 participants. In the first study of its kind in the United States, we propose to estimate 30-year trajectories of key vascular, metabolic and lifestyle factors, and quantify brain region volumes by MRI to assess their relationship to level and change in cognition in adulthood. In addition, we will use already collected genome-wide genetic data to investigate the association of genetic variants, which are known to influence these risk factors and brain MRI outcomes, with cognition. Completion of the scientific aims will help determine when cognitive changes begin to occur in mid-life and the use of a life course approach will allow us to study long-term exposure, from early life onward, in hopes of studying the potential effect of risk factor modification. The proposal has great

Lay Summary

PUBLIC HEALTH RELEVANCE: The proposal has great public health relevance: if we can increase our understanding of cognitive function in midlife and identify earlier risk factors extending from early adulthood, it may be possible to intervene to prevent the onset of disease and maintain healthy brain aging.

Further information available at:

Types:

Investments > €500k

Member States:

United States of America

Diseases:

Alzheimer's disease & other dementias

Years:

2016

Database Categories:

N/A

Database Tags:

N/A