

Self-Regulation, Immunological Aging, and Health in Older Adults

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Contact information of lead PI Country

USA

Title of project or programme

Self-Regulation, Immunological Aging, and Health in Older Adults

Source of funding information

NIH (NIA)

Total sum awarded (Euro)

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Start date of award

15/07/2006

Total duration of award in years

10

The project/programme is most relevant to:

Alzheimer's disease & other dementias

Keywords

Acquired Cognitive Impairment... Aging... Alzheimer's Disease... Alzheimer's Disease including Alzheimer's Disease Related Dementias (AD/ADRD)... Basic Behavioral and Social Science... Behavioral and Social Science... Brain Disorders... Clinical Research... Clinical Research - Extramural... Dementia... Epidemiology And Longitudinal Studies... Immune System... Mental Health... Mind and Body... Neurodegenerative... Prevention

Research Abstract

DESCRIPTION (provided by applicant): Older adults are at high risk for a number of health problems, including cardiovascular disease, infectious disease, and cancer. Underlying at least part of this risk is immunological aging, but not all older adults experience immunological aging to the same degree, nor do they experience the same health risk and health problems. The purpose of this project is to measure individual differences and changes in self-regulation over time in older adults and to link self-regulation to subjective health, health risks, and clinically relevant markers of immunological aging, including inflammation and markers of lymphocyte terminal differentiation and replicative senescence. This is a competing renewal of this longitudinal study, which began in 2001 and received R01 funding in 2006, submitted by a research team with expertise in aging, self-regulation, neuropsychology, autonomic and inflammatory biology, immunology, and longitudinal design and analysis. The first period of the study focused on risk factors, especially stress and repetitive thought, and their effects on psychological well-being, subjective health, and immune response to vaccination. The renewal continues assessment of these risk factors to provide continuity in this longitudinal dataset and adds innovation in the assessment of factors that may promote healthy aging and mitigate against effects of risks. Specifically, the aims of the study are, first, to test the effects of a self-regulatory constellation (comprising self-regulation, executive cognitive function, and heart rate variability [HRV]) on subjective psychological, social, and physical health and markers of immunological aging. Second, we will test the relationships between this constellation and risk factors such as age and stress. Third, we will test the ability of the constellation to moderate risk effects. A further aim is to support a "call for collaboration" in which we propose to work with other investigators whose hypotheses can be tested with study data from 2001 through the current renewal. At 6-month intervals, older adults (N = 150) will complete measures of the self-regulatory constellation: behavioral, emotional, social, and cognitive self-regulation; executive cognitive functions including inhibition, shifting, and working memory; and resting HRV. They will complete measures of risk including stress, pain, physical activity, BMI, and waist circumference. Finally, they will complete measures of psychosocial health including depression, perceived cognitive and physical health, and marital satisfaction. Blood draws will be synchronized with these visits, and assays performed on these samples will capture two aspects of immunological aging: increases in serum proinflammatory cytokines and their soluble receptors and increases in markers of terminal differentiation and senescence in T cells and NK cells. This renewal will be innovative in its comprehensive assessment of self-regulation as well as risk; the longitudinal design that allows for the study of change and lagged, mediational, and bidirectional effects; and the focus on the role of self-regulation in healthy aging.

Lay Summary

PUBLIC HEALTH RELEVANCE: With age come changes in the immune system that can increase the risk of poor health. However, not all older adults experience these changes to the same degree. This project will continue to track a cohort of older adults, examining psychological factors that may be protective for psychological and physical health and delay

immunological aging as well as those factors that may confer risk and the interactions between protective and risk factors.

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:

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