NUS Graduate School for Integrative Sciences and Engineering
Research Project Write-up

Title of Project : Influence of genetic, midlife diet and lifestyle factors on successful ageing – The Singapore Chinese Health Study

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Short Description

Abstract

There has been a dramatic increase in human life expectancy since the turn of the last century. Population ageing is a global problem that poses increasing health, social and economic challenges. The medical, societal and economic burdens of ageing come from increase in incidence of chronic age-related diseases in the elderly population and gradual loss of bodily functions and independence in activities of daily living. Hence, with the numbers of those reaching old age rapidly increasing worldwide, the focus of the medical and scientific communities is on helping the elderly prevent disease, preserve health and maintain a good quality of life. This proposal will investigate how genetic, midlife factors in diet and lifestyle, as well as subsequent modifications, affect outcomes that define successful ageing measured in the physical, functional and cognitive domains. The study is nested within The Singapore Chinese Health Study, an ongoing, population-based prospective cohort established between 1993 and 1998. We have collected comprehensive information on diet and lifestyle factors at recruitment and updated selective lifestyle factors in two subsequent follow-up interviews. Blood samples were collected and archived between 1999 and 2004. During a recent follow-up interview conducted among 17,000 survivors of this cohort between 2014 and 2016, measurements of ageing outcomes were obtained using validated questionnaires and physical measures. Findings from this project will provide scientific evidence for direct diet and lifestyle interventions, and inform the development of nutraceutical or functional food for preservation of health and prevention of disease among the elderly.