PL07

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EXERCISE AND OTHER LIFESTYLE FACTORS: CAN COGNITIVE DECLINE AND DEMENTIA BE PREVENTED?

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Abstract:

Epidemiological studies indicate that between 30% and 50% of the population attributable risk of Alzheimer’s disease can be accounted for by seven modifiable environmental factors: low physical activity, mid-life obesity, mid-life hypertension, type 2 diabetes, low educational attainment, smoking and depression. While prevention is not yet possible, delay in onset of dementia is feasible.

Recent cohort findings that the prevalence and incidence of dementia may be decreasing in older populations has been postulated to be secondary to better education, nutrition and lifestyle and attention to cardiac risk factors. A Finnish study demonstrated that attending to vascular and lifestyle risk factors reduced the rate of cognitive decline in 60–77 year old individuals. There is accumulating evidence for benefits of physical exercise (which also assists in reducing risk of obesity and type 2 diabetes) and to some extent for computer cognitive training. Even small reductions in environmental risk factors could have major effects in reducing the global prevalence of Alzheimer’s disease. In USA, studies are underway focusing on amyloid beta protein toxicity mainly using antibodies to prevent participants manifesting clinical Alzheimer’s disease.

We are undertaking a large RCT of an internet based prevention program. The intervention group will receive four three-month modules of physical exercise, computer cognitive training, dietary advice and monitoring and treatment for depression or stress management, followed by booster sessions over the four years of follow-up. The control group will receive regular information. Assessments and interventions will be delivered on the internet and will incorporate advice of blood pressure monitoring, cessation of smoking and safe alcohol intake.

With the lack of success to date for treatment of Alzheimer’s and other dementias, more attention is being focused on ways to maintain cognitive health with aging.

Keywords: physical activity, healthy ageing