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Life Style and the Prevention of Dementia

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As the population of the world ages and life expectancy is prolonged, the prevention of chronic morbidity becomes a primary goal for many health systems. Healthy aging is gaining importance as a major topic for research in the medical scientific community. For decades, cardiovascular morbidity has been the leading concern, but in recent years, we have become more aware of the importance of cognitive decline and the relationship between cardiovascular risk factors and dementia. Of these, hypertension, smoking and diabetes, as well as the metabolic syndrome are the most recognized risk factors for cognitive impairment [1, 2]. Genetic associations are also widely investigated and the Apo E4 allele is increasingly recognized as the most influential genetic association to Alzheimer's disease (AD). Other associations studied are various emotional and social factors. These are especially intriguing and carry great significance either as sensitive early clinical markers of cognitive decline or as modifiable risk factors with opportunities for relatively simple interventions [1]. Previously identified social risk factors for dementia include the level of education, occupation, depression and stress, as well as leisure and physical activities [2–4].

In the current issue of Neuroepidemiology, Camozzato and her colleagues have investigated different social variables and their influence on the occurrence of AD in a cohort of aging Brazilians enrolled into the PALA (Porto Alegre Longitudinal Aging) study [5]. The participants were all above 60 years of age and cognitively preserved at the entrance to the study. Many social characteristics were analyzed including marital status and living relatives, participation in recreational activity and having a confidant. During a follow-up period of up to 12 years, a little over 10% of participants became demented. In this prospective observational study, the only social factor that was found to be significantly associated with the development of AD was the absence of a confidant, with a hazard ratio of 5.3 after corrections for age and MMSE score at study entrance. It did not matter whether the confidant was a family member or if there were multiple confidants. The defining features for the confidant were his or her ability to provide intimate and

confidential emotional support for the individual. This study correlates with a previous one by Andrew and colleagues in which an index comprised of multiple social factors was shown to be directly associated with cognitive decline. The index included some variables that match the current study's definition of a confidant [6].

These findings are interesting and coincide with previous recognition that social isolation and loneliness are associated with depression and the development of dementia [4]. Having a person in whom one may confide and receive emotional support is expected to reduce the sense of loneliness. It also makes sense that the identity and demographic characteristics of the confidant are not relevant to his or her influential role on the person's well-being. It is well known that animals have a similar effect on people, and as a matter of fact may encompass the three aspects of a confidant as defined by Camozzato's group. Pet ownership has recently been shown to attenuate loneliness among elderlies living alone [7]. Other studies have shown it to reduce blood pressure and maintain a normal heart rate [8]. Animal-assisted interventions such as guide dogs for the blind and horse riding for the disabled are becoming popular by the day, as well as health recommendations for pet companion for the elderly.

We are increasingly aware of how lifestyle interventions such as adopting a pet, engaging in social, physical and leisure activities and cognitive training may reduce the risk for dementia and maintain our general and cognitive health [3, 9]. These interventions may not always be simple to achieve; however, they may require a lesser financial investment and carry less adverse effects than taking a prescription drug.

It is incredibly complex to design good studies on the social and emotional factors contributing to longevity and cognitive health. Most studies published thus far have been retrospective or cross-sectional. For this reason, the report by Camozzato et al. stands out by being a prospective study with a relatively long follow-up period. More studies like this are warranted and interventional research on lifestyle modifications should be encouraged in order for us to establish a practical but comprehensive and evidence-based guideline recommendations regarding lifestyle interventions for reducing the risk of dementia.

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