

Letter

Dementia (Including Alzheimer's Disease) can be Prevented: Statement Supported by International Experts

On the occasion of the G8 dementia summit in London on 11 December 2013, we call upon the governments of the G8 countries to make *prevention of dementia* one of their major health aims.

- The commonest dementia (Alzheimer's disease) is irreversible and develops slowly over many years.
- So far drugs have only relieved symptoms, but have not been effective against disease progression.
- About half of the large decline in deaths from heart disease and stroke over the past 50 years has been the result of public health measures to modify risk factors. *We are confident that the same approach will work for dementia.*
- We propose that a concerted effort be made to discover modifiable risk factors for dementia and to exploit those already identified.
- International collaboration is needed on large-scale clinical trials to test whether modifying risk factors will lead to prevention of dementia.
- Health authorities should aim to identify high risk individuals at an early stage, when intervention is more likely to help.
- *There is already sufficient evidence to justify immediate action.* Trials in those at risk of developing dementia should be done of the following: exercise; controlling blood sugar, including diabetes treatment; depression treatment; high blood pressure treatment; B vitamins; omega-3 fatty acids; cognitive training; and social activities.
- Public health policies should encourage middle-aged people to stop smoking; exercise; eat diets rich in fruit and vegetables and fish (Mediterranean foods); avoid becoming obese and diabetic; avoid excessive alcohol intake; treat high

blood pressure. In other words – *tell people that adopting a healthy lifestyle may help to ward off dementia as it does for other diseases.*

- It is notable that the prevalence of dementia and cognitive impairment in some Western countries is now less than anticipated, possibly as a result of changes in lifestyle and the reduction in cardiovascular risk factors, although this may not necessarily mean that worldwide trends in the burden of dementia will be substantially reduced.
- We estimate that about half of Alzheimer's disease cases worldwide might be attributable to known risk factors. Taking immediate action on the known risk factors could perhaps prevent up to one-fifth of predicted new cases by 2025.
- The worldwide costs of dementia in 2010 have been estimated to be \$604 billion, most of it in G8 countries. Prevention of dementia would thus not only prevent a lot of human suffering but would save huge sums of money.
- *We call upon the Health Ministers of the G8 countries to greatly increase government funding for research on the prevention of dementia.*

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- BA Lawlor (Trinity College, Dublin)
- J Lindesay (University of Leicester, UK)
- A Lobo (University of Zaragoza, Spain)
- J Lökk (Karolinska Institute, Stockholm)
- O Makeeva (Russian Academy of Medical Sciences, Tomsk)
- J Marksteiner (President, Austrian Alzheimer Society)
- A McCaddon (Cardiff University Medical School)
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- LT Middleton (Imperial College, London)
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- K Ritchie (INSERM, Montpellier)
- WA Rocca (Mayo Clinic, Rochester, MN)
- IH Rosenberg (Tufts University, Boston)
- PS Sachdev (University of New South Wales)
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- S Seshadri (Boston University)
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Some selected references to recent relevant literature are:

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Is dementia incidence declining?: Trends in dementia incidence since 1990 in the Rotterdam Study.

Schrijvers, E. M., B. F. Verhaaren, P. J. Koudstaal, A. Hofman, M. A. Ikram and M. M. Breteler. *Neurology* (2012) 78:1456-1463.

Twenty-year changes in dementia occurrence suggest decreasing incidence in central Stockholm, Sweden.

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The worldwide economic impact of dementia 2010.

Wimo, A., L. Jonsson, J. Bond, M. Prince, B. Winblad. *Alzheimers Dement* (2013) 9:1-11 e13.

The global prevalence of dementia: A systematic review and metaanalysis.

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New insights into the dementia epidemic.

Larson, E. B., K. Yaffe and K. M. Langa. *New Engl J Med* (2013), doi: 10.1056/NEJMp1311405.

Some international and national initiatives

European Dementia Prevention Initiative: <http://www.edpi.org/>

The Healthy Brain Initiative (CDC and Alzheimer's Association, USA): <http://www.cdc.gov/aging/healthybrain/roadmap.htm>

OECD Global Challenge of Alzheimer's disease: http://www.oecd-ilibrary.org/science-and-technology/emerging-trends-in-biomedicine-and-health-technology-innovation_5k44zcpt65vc-en

A National Alzheimer's Strategic Plan (Alzheimer's Association, 2009): http://www.alz.org/documents/national/report_asg_alzplan.pdf

National Plan to Address Alzheimer's Disease: 2013 update: <http://aspe.hhs.gov/daltcp/napa/NatlPlan2013.pdf>

National dementia strategies for the UK (Alzheimer's Society): <http://www.alzheimers.org.uk/ndstrategies>

UK Department of Health statement (September 2013): <http://dementiachallenge.dh.gov.uk/2013/09/25/on-the-road-to-the-g8-dementia-summit/>

CONFLICT OF INTEREST STATEMENT

ADS is named as inventor on patents held by the University of Oxford for the use of B vitamins

in the treatment of mild cognitive impairment and Alzheimer's disease; he has grant support from the Norman Collisson Foundation. KY serves on the data and safety monitoring boards for the National Institute on Aging, Takeda Pharmaceutical Company Limited and Beeson Scientific Advisory and is a consultant

to Pfizer and Novartis; she has grant support from National Institute on Aging, Alzheimer's Association, American Health Assistance Foundation, the California Department of Public Health, and the US Department of Defense.