



# Nutrition and dementia

A review of available research



**Alzheimer's Disease  
International**

*The global voice on dementia*

Supported by



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GROUP

## **Nutrition and dementia**

Published by Alzheimer's Disease International (ADI), London. February 2014

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This project was funded by a grant from Compass Group. ADI is fully responsible for the content

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### **The Global Observatory for Ageing and Dementia Care**

The Global Observatory for Ageing and Dementia Care, hosted at the Health Service and Population Research Department, King's College London, was founded in 2013. Supported by Alzheimer's Disease International, and King's College London, the Observatory has a tripartite mission:

- 1 To build upon ADI's 10/66 Dementia Research Group programme of population-based and intervention research in low and middle income countries, maximising the impact that research findings from our data can have upon policy and practice.
- 2 To develop, evaluate, and promote primary care and community interventions for people with dementia.
- 3 To synthesise global evidence for policymakers and public, in particular, continuing and developing our role in the preparation of high impact evidence-based reports for Alzheimer's Disease International (World Alzheimer Reports 2009, 2010, 2011 and 2013), the World Health Organization (Dementia: a public health priority, 2012) and other relevant intergovernmental organisations.

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# Introduction

Eating and having a good meal is part of our everyday life and important to everybody, not least to people living with dementia. But it is still an almost totally neglected area of focus in relation to these diseases.

Compass Group and Alzheimer's Disease International (ADI) have come together in commissioning this report to investigate how the right nutrition can help to make life better for people who live with dementia. This is clearly reflected in ADI's mission and vision: 'an improved quality of life for people with dementia and their carers'. Compass Group, as world-leading food and support services organisation, shares this vision in their work to support people who are affected by dementia.

This report was prepared by Professor Martin Prince, Professor Emiliano Albanese, Dr Maëlénn Guerchet and Dr Matthew Prina for the Global Observatory for Ageing and Dementia Care, King's College London. They have reviewed a number of areas in existing research regarding the relevance of nutritional factors to primary and secondary prevention of dementia, undernutrition in dementia and interventions to improve the nutrition of people living with dementia.

The report shows the importance of each of these factors in the everyday nutrition and care of people with dementia. In addition, it identifies how we can start building methods and guidelines that will complement clinical treatment of the diseases. It highlights:

- the link between nutrition and quality of life
- the previous neglect of this important issue, as evidenced by the high prevalence of undernutrition and inadequate food intake among people with dementia
- the untapped potential to improve outcomes for people with dementia, given the evidence for effective interventions
- the need for more research in this area.

A healthy diet and nutrition is fundamental to wellbeing at any stage of life and to helping to combat other life-threatening diseases. We believe it can play as important a role in relation to dementia.

ADI believes that the key to winning the fight against dementia lies in a unique combination of global solutions and local knowledge. As such, it works globally to focus attention on the epidemic of dementia, while also empowering local Alzheimer associations to promote and offer support for people with dementia and their carers.

Compass Group is a company that operates in more than 50,000 client locations in around 50 countries and serves over 4 billion meals per year. By working closely with our care home clients, we can improve the quality of their food and support services allowing them to focus on caring for their residents. People living with dementia are a small but growing constituency of Compass' business.

ADI and Compass Group believe that a focus on diet, nutrition and wellbeing is a positive approach to supporting people with dementia and their carers in dealing with this terrible disease. It is not only a good collaboration but the right thing to do.



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## Key messages

- 1 Undernutrition is common among older people generally, particularly in low and middle income countries. For this age group it is, arguably, a larger public health problem than obesity. The consequences include increased frailty, skin fragility, falls, hospitalisation and mortality.
- 2 Undernutrition is particularly common among people with dementia in all world regions. It tends to be progressive, with weight loss often preceding the onset of dementia and then increasing in pace across the disease course.
- 3 Obesity in mid-life may be a risk factor for developing dementia in late-life. If so, this is an important modifiable risk factor, and a matter of concern given rising levels of obesity worldwide. However, careful examination of the existing evidence casts some doubt upon the validity and robustness of this finding, which requires more research.
- 4 There are many dietary factors that might plausibly increase or decrease risk for the onset of dementia. However, we could find no clear or consistent evidence to support a causal protective role for vitamins B<sub>6</sub>, B<sub>12</sub>, C or E, folate or omega-3 PUFA (polyunsaturated fatty acids). There is quite consistent evidence from epidemiological cohort studies that adherence to a Mediterranean diet (with a high proportionate intake of cereals, fruits, fish and vegetables) may lower the risk of cognitive decline and dementia. However, to date, only one trial has been carried out, with encouraging findings.
- 5 The mechanisms underlying weight loss and undernutrition in dementia are complex, multifactorial, and only partly understood. Reduced appetite, increased activity, and, in the more advanced stages of the illness, the disruption of eating and feeding behaviours by cognitive and behavioural problems all play a part. For some forms of dementia, it may be that central regulation of appetite and metabolism is disturbed as an inherent feature of the disease.
- 6 A key finding in this report is that while weight loss is a common problem for people with dementia, undernutrition can and should be avoided. Proof of concept comes from a new review of the use of oral nutritional supplements, indicating that it is possible to stabilise or even increase the weight of people with dementia over relatively long periods. The nutritional benefits of education and training for caregivers was less apparent, although such interventions were popular and there are likely to be other benefits.
- 7 In care homes, attention to staff training and mealtime environment can lead to significant enhancement in calorie intake among residents. Eating is a social activity, and more thought should be given to how this can be optimised, normalised and made a core aspect of person-centred care. Sensitive and inclusive design of dining rooms, kitchens, furniture and tableware can all make important contributions.
- 8 There is no current evidence that nutritional supplementation whether with micronutrients, 'medical foods' or macronutrients can modify the course of dementia (cognitive and functional decline). Vitamin E shows some promise, but at doses that may lead to harmful side effects.
- 9 Much more attention needs to be focused upon the problem of undernutrition in dementia. This has been grossly neglected in research and practice. Studies reviewed in this report indicate that 20-45% of those with dementia in the community experience clinically significant weight loss over one year, and that up to half of people with dementia in care homes have an inadequate food intake.