

# Food for thought! The role of dietary choices on cognitive behaviour

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## Introduction

1 in 6 people over 65 experience cognitive impairment. There are 35 million people with dementia in the world, and 820 000 people in the UK.<sup>1</sup>

Lifestyle behaviours could contribute to a preservation of cognitive functioning until later in life<sup>2,3</sup> and a slower rate of cognitive decline<sup>4</sup>.

Healthy dietary choices such as increased consumption of fruit and vegetables, and limited fat intake are associated with a lower risk of cognitive decline.

## Aim

To examine the role of dietary choice on cognitive decline from mid to later life, independently and in combination with other lifestyle behaviours (smoking and physical activity).

## Methods

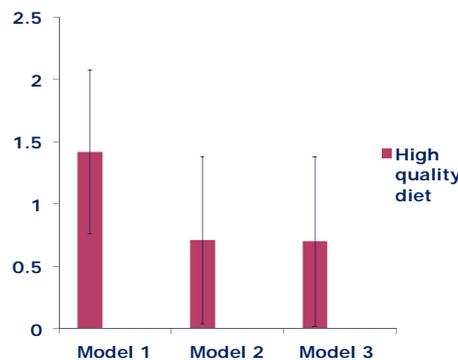
**Data:** MRC National Survey of Health and Development (NSHD). A nationally representative sample of 5362 participants followed up since birth in March 1946.

## Results



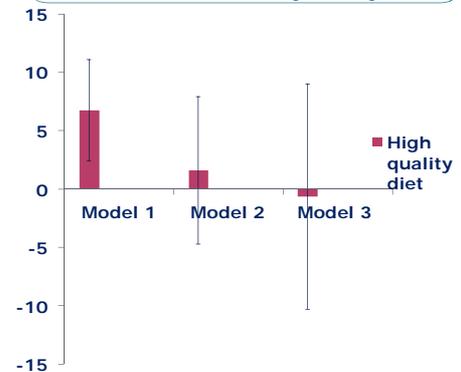
There was a positive association between quality of diet at 36 and 43 years and verbal memory at age 43y. There was no association with letter search speed.

Figure 1. Verbal memory decline (43y to 60y+) by diet quality (overall score 36y & 43y)



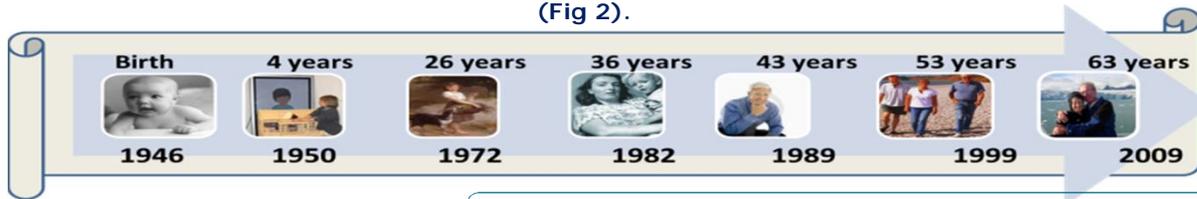
Model 1: sex adjusted  
Model 2: Model 1 + confounders  
Model 3: Model 2 + smoking & physical activity

Figure 2. Letter search speed decline (43y to 60y+) by diet quality (overall score 36y & 43y)



Model 1: sex adjusted  
Model 2: Model 1 + confounders  
Model 3: Model 2 + smoking & physical activity

A healthier choice of diet quality was associated with slower verbal memory decline from 43 to 60-64 years (Fig1). There was no association between dietary choice and letter search speed decline (Fig 2).



**Outcome measures:** Verbal memory and letter search speed at 60-64 years, adjusted for their corresponding measures at 43 years.

**Exposures:** Information from 5-day diet diaries at 36 & 43 years. Healthy dietary score based on 5 items: consumption of breakfast, type of milk, type of bread, fruit & vegetables intake, and percentage of energy from fat. Derived overall score: less healthy quality=0, healthier quality diet=1 (median split).

**Confounders:** childhood social class, childhood cognitive ability, educational attainment; adult social class, affective symptoms at 60-64 years.

## Conclusions



These results suggest that a healthy dietary choice based on regular breakfast consumption, high intake of fruit and vegetables, complex carbohydrates and cereals, and lower percentages of dairy fat in early midlife, is protective of verbal memory decline from mid to later life, but not speed of processing.

These associations were independent of confounders and other lifestyle behaviours such as exercise and smoking.

Public health interventions based on healthy quality diets are a possible line of defence against cognitive decline and dementia, although these findings need to be externally replicated.

## References:

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