



Food for thought

A subgroup analysis of the Framingham Study found a strong association between homocysteine and the risk of dementia. The association appears to be independent of age, sex, *APOE* genotype, plasma vitamin levels and other putative risk factors for dementia. At their 20th biennial follow-up, 1092 dementia-free subjects had their plasma homocysteine levels measured. Over a median follow-up period of 8 years, 111 subjects developed dementia. Those with a plasma homocysteine level $>14 \mu\text{mol/L}$ had almost twice the risk of those with lower levels. Vitamin therapy with folic acid, alone or with vitamins B₁₂ and B₆, can reduce plasma homocysteine levels. Prospective trials will be required to demonstrate if vitamin B supplements will reduce the risk of dementia.

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Use it or lose it

In another prospective study, frequent participation in cognitively stimulating activities was associated with a reduced risk of Alzheimer's disease (AD). The Religious Orders Study recruited Catholic nuns, priests and brothers aged ≥ 65 years from across the United States. Dementia was excluded at baseline, and 20 cognitive tests were completed. Involvement in seven common activities that require information processing (eg, reading newspapers, watching television) was rated on a scale of 1 (\leq once per year) to 5 (almost daily). The average score

for each person ranged from 1.57 to 4.71 and the mean for the group was 3.57 (SD, 0.55). Cognitive testing was repeated each year. During an average of 4.5 years of follow-up, 111 of 724 persons developed AD. Taking into account possible effects of age, sex, educational level, baseline cognitive activity, *APOE* genotype, medical conditions, physical activity level and depression, a one-point increase in cognitive activity score was associated with a 33% reduction in risk for AD (hazard ratio, 0.67 [95% CI, 0.49–0.92]).

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Sugar daddies

In a study of (predominantly white) males, a "western" dietary pattern was associated with increased risk for type 2 diabetes. The Health Professionals Follow-up Study recruited men aged 40 to 75 years from across the United States. This analysis included 42504 men who were free of diabetes and other medical illnesses in 1986. Each reported on any development of illness every two years until 1998, and completed detailed food questionnaires in 1986, 1990 and 1994. Over 12 years, 1321 men developed type 2 diabetes. Two dietary patterns emerged with factor analysis, characterised by higher consumption of vegetables, fruit, fish, poultry and whole grains ("prudent"); or red meat, processed meat, French fries, high-fat dairy products, refined grains and desserts ("western"). Men

in the highest quintile for western diet had a relative risk

of 1.59 (95% CI, 1.32–1.93) for developing type 2 diabetes compared to those in the lowest.

For men who were also obese, the relative risk was 11.2 (95% CI, 8.07–15.6).

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A fish story

In a recent Danish study, low consumption of fish during pregnancy was a strong risk factor for low birth weight and preterm delivery. A total of 8729 women completed questionnaires at 16 and 30 weeks' gestation, reporting on their intake of fish, including roe, prawn, crab and mussel. Four groups were identified, ranging from women who ate no fish, to those consuming at least two fish meals a week (44.3g/day).

Occurrence of low birth weight and preterm delivery decreased with increasing fish intake. Comparing the lowest and the highest intake groups (after adjustment for confounding factors), the odds ratio for low birth weight was 3.57 (95% CI, 1.14–11.14) and for preterm delivery 3.60 (95% CI, 1.15–11.20).

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Special babies

In a Western Australian study, babies born through assisted conception were twice as likely to have a major birth defect as those conceived naturally. Researchers compared the prevalence of major birth defects in 301 infants conceived by intracytoplasmic sperm injection (ICSI) and 837 infants conceived by in vitro fertilisation (IVF) with the prevalence in 4000 naturally conceived babies, all born between 1993 and 1997. At the age of one year, 8.6% of ICSI babies and 9% of IVF babies had been diagnosed as having a major birth defect, compared with 4.2% of naturally conceived babies. It was not possible to separate the excess risk that may be associated with infertility treatment from the excess risk related to the underlying causes of infertility.

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