**Ginkgo biloba did not prevent dementia or Alzheimer disease in elderly people**

**QUESTION**

Does *Ginkgo biloba* reduce incident dementia and Alzheimer disease in elderly people with normal cognition or mild cognitive impairment?

**METHODS**

**Design:** randomised placebo controlled trial (Ginkgo Evaluation of Memory [GEM] study). ClinicalTrials.gov NCT00010803.

**Allocation:** unclear allocation concealment.*

**Blinding:** blinded (patients, clinicians, and outcome assessors).*

**Follow-up period:** median 6.1 years.

**Setting:** 5 academic medical centres in the USA.

**Participants:** 3069 participants >75 years of age (mean age 79 y, 54% men) who had normal cognition or mild cognitive impairment (impaired at ≤10th percentile of Cardiovascular Health Study normative data on 2 of 10 neuropsychological tests and Clinical Dementia Rating global score of 0.5). Exclusion criteria included dementia; bleeding disorders; Parkinson disease; receipt of warfarin, cholinesterase inhibitors, antidepressants, or antipsychotics; abnormal thyroid tests, serum creatinine concentration >2 mg/dl (>176.8 μmol/l), or liver function test result >2 times the upper limit of normal; or allergy to *Ginkgo biloba*.

**Intervention:** *Ginkgo biloba*, 120 mg twice daily (n = 1545), or matching placebo (n = 1524).

**Outcomes:** diagnosis of dementia and Alzheimer disease.

**Patient follow-up:** 94% (intention-to-treat analysis).

**MAIN RESULTS**

*Ginkgo biloba* and placebo did not differ for incident dementia or Alzheimer disease (table).

**CONCLUSION**

*Ginkgo biloba* did not prevent incident dementia or Alzheimer disease in elderly people with normal cognition or mild cognitive impairment.

**ABSTRACTED FROM**


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**Clinical impact ratings:** Elderly care 6/7; Family/general practice 6/7; Psychiatry 6/7

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**Table: Ginkgo biloba v placebo for preventing dementia in elderly people**

<table>
<thead>
<tr>
<th>Outcomes</th>
<th><em>Ginkgo biloba</em></th>
<th>Placebo</th>
<th>RRI (95% CI)</th>
<th>NNH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dementia</td>
<td>18%</td>
<td>16%</td>
<td>11% (1–6 to 29)</td>
<td>Not significant</td>
</tr>
<tr>
<td>Alzheimer disease</td>
<td>17%</td>
<td>14%</td>
<td>15% (1–3 to 35)</td>
<td>Not significant</td>
</tr>
</tbody>
</table>

*Abbreviations defined in glossary. RRI, NNH, and CI calculated from control event rates and hazard ratios in article.*

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**Ginkgo biloba** is a popular herbal supplement that is widely used in Europe and the USA for both treating and preventing dementia. However, good quality evidence supporting its effectiveness is lacking. In 2007, a Cochrane review of 35 clinical trials (n = 4247) suggested that *Ginkgo biloba* was ineffective for dementia.¹ The study by DeKosky et al shows that *Ginkgo biloba* is no more effective than placebo for preventing dementia. It addresses many weaknesses identified in previous studies by virtue of its large size (n = 3069) and relatively lengthy duration (>6 y exposure to *Ginkgo biloba* or placebo).

People often consider herbal therapies to be safe, even if they are not effective, and although I have previously suggested that financial harm occurs if people spend money on ineffectual remedies,² this study suggests that physical harm may also occur. There was a non-significant increase in haemorrhagic strokes in the intervention group, and although this may be due to chance alone, it raises the question of “how safe is *Ginkgo biloba*?” This is an important question as the perception exists that herbal remedies are intrinsically safer than pharmaceutical preparations.³ The clinical bottom line is that no evidence exists to support use of this supplement to prevent dementia. This fits into the broader picture that *Ginkgo biloba* has no effect on slowing down progression of dementia in the early stages of disease.

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