Authors' objectives
To assess the efficacy of herbal medicines for the treatment of non-ulcer dyspepsia.

Searching
MEDLINE, EMBASE, CINAHL, AMED, the Cochrane Library (Issue 2, 2001) and CISCOM were searched from inception to September 2001 for studies published in English and other languages; the search terms were given. The reference lists of retrieved articles and the authors' personal files were also searched. In addition, experts in the field and manufacturers of relevant herbal products were contacted for published and unpublished studies.

Study selection
Study designs of evaluations included in the review
Randomised controlled trials (RCTs) were eligible for inclusion. The authors stated that uncontrolled studies, case reports, pre-clinical and observational studies were reviewed for safety data and information on the mechanism of action.

Specific interventions included in the review
Studies of herbal remedies given as supplements were eligible for inclusion. The herbal remedies included in the review were monopreparations of turmeric, greater celandine, banana powder or Emblica officinalis, or combination preparations with mainly caraway and peppermint as the constituents. The duration of treatment ranged from 1 to 8 weeks.

Participants included in the review
Studies of participants with a diagnosis of non-ulcer dyspepsia were eligible for inclusion. In the included studies, all participants were diagnosed with either non-ulcer or functional dyspepsia.

Outcomes assessed in the review
Explicit inclusion criteria for the outcomes were not given in the report. The outcome included in the review was symptom improvement as defined by the original trialist.

How were decisions on the relevance of primary studies made?
The authors did not state how the papers were selected for the review, or how many reviewers performed the selection.

Assessment of study quality
The authors assigned a quality score to each study (1 being the lowest and 5 the highest), using the Jadad instrument to assess randomisation, blinding, and description of withdrawals and drop-outs. The authors did not state how the quality assessment was performed.

Data extraction
One reviewer extracted the data from each included study, which were subsequently checked by a second reviewer. Data were extracted on the proportion of patients reporting improvements in symptoms and adverse events as reported in the individual study.

Methods of synthesis
How were the studies combined?
The studies were combined in a narrative summary grouped by intervention.
How were differences between studies investigated?
Differences between the studies were investigated through tabulation of the included studies.

**Results of the review**
Seventeen RCTs (n=1,808) were included in the review. The authors also included safety data from uncontrolled studies, case reports, pre-clinical and observational studies.

Four studies scored 1 for methodological quality, five scored 2, six scored 3, one scored 4 and one scored 5.

Four RCTs (n=260) evaluated monopreparations and 13 RCTs evaluated combination preparations (n=1,548). All of the included studies found a reduction in symptoms associated with the use of herbal medicinal products. Sixty to 95% of patients given herbal remedies reported improvements in symptoms compared with baseline and/or placebo or the comparator drug. In 5 of the 10 studies that compared herbal remedies with placebo, 30 to 55% of patients given placebo reported improvements in symptoms compared with baseline. Adverse events were reported by 84 out of 1,046 patients, although comprehensive safety data were not available.

**Authors' conclusions**
Several herbal remedies, notably peppermint and caraway, were found to have anti-dyspeptic activity and promising safety profiles. Further research is needed to determine their role in the treatment of patients with non-ulcer dyspepsia.

**CRD commentary**
The review question was clear in terms of the population, intervention and study design. Several sources were searched to identify relevant studies and methods were used to reduce publication and language bias. The methods used to select studies for inclusion were not reported, thus the potential for selection bias cannot be ruled out. However, methods were used to minimise bias and error in the data extraction process. The quality of the included studies was assessed systematically. Adequate details of the included RCTs were given in the report, although limited information was given for studies providing additional safety data. Presenting the studies in a narrative summary was appropriate given the apparent differences across the included studies. The authors' suitably cautious conclusions are appropriate based on the evidence presented.

**Implications of the review for practice and research**
Practice: The authors did not state any implications for practice.

Research: The authors stated that further research is needed to elucidate the role of individual components in combination products and potential herb-drug interactions.

**Bibliographic details**

**PubMedID**
12269960

**Other publications of related interest**
These additional published commentaries may also be of interest. Locke GR. Review: herbal medicinal products seem to be effective and safe in nonulcer dyspepsia. Evid Based Med 2003;8:153. Locke GR. Review: Herbal medicinal products seem to be effective and safe in nonulcer dyspepsia. ACP J Club 2003;139:43.

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This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.