Authors' objectives
To determine the efficacy of common self-help and alternative treatments of premenstrual syndrome (PMS).

Searching
MEDLINE on SilverPlatter was searched from 1981 to 1993 for articles published in English, using the keywords 'premenstrual syndrome', 'treatment', 'drug therapy' and 'clinical trial'. The reference lists of retrieved articles were examined to identify further studies.

Study selection
Study designs of evaluations included in the review
Placebo-controlled clinical trials were included. There were 8 crossover trials, 5 parallel trials, and one crossover and/or parallel trial.

Specific interventions included in the review
Vitamin, mineral and herbal treatments including vitamin B6, vitamin E, calcium, magnesium and evening primrose oil.

Participants included in the review
The participants had objectively documented PMS, according to a well-recognised definition, and the menstrual cycle was spontaneous and well characterised.

Outcomes assessed in the review
The presence or severity of PMS, evaluated through the use of daily prospective self-administered questionnaires (e.g. Moos Menstrual Distress Questionnaire, Calendar of Premenstrual Experiences, and the Premenstrual Assessment Form), daily visual analogue scales, global assignment after each cycle, or one-time assessment. Interventions were recorded as having positive, ambiguous or negative effects. Trials evaluating only one class of PMS symptoms were excluded.

How were decisions on the relevance of primary studies made?
The authors do not state how the papers were selected for the review, or how many of the authors performed the selection. Studies of treatment only available by prescription in Canada were excluded, as were studies that only evaluated one class of PMS symptom.

Assessment of study quality
The trials were assessed according to the methods of Chalmers et al. (see Other Publications of Related Interest no.1) and Detsky et al. (see Other Publications of Related Interest no.2), incorporating specific criteria relating to PMS used by Kleijnen et al. (see Other Publications of Related Interest no.3). A methodological score was assigned to each trial, ranging from 0 to a maximum of 12. Each trial was assessed by two independent reviewers. Disagreements were discussed, and where no consensus could be reached a third reviewer was used to reach a final decision.

Data extraction
The authors do not state how the data were extracted for the review, or how many of the authors performed the data extraction.

Methods of synthesis
How were the studies combined?
The studies were grouped according to the type of intervention, and a narrative overview of the results was presented. The number of positive, negative and ambiguous effects for each intervention type were added together.

How were differences between studies investigated?
No statistical tests of heterogeneity were undertaken.

Results of the review
Fourteen placebo-controlled trials (n=940) were included: 6 studied vitamin B6 (n=622), 4 studied evening primrose oil (n=142), 2 examined vitamin E (n=115), one looked at calcium (n=33), and one looked at magnesium (n=28).

The average methodological score was 7.1 (range: 3.0 - 10.5). All 4 trials of calcium, magnesium and vitamin E concluded that the treatment in question had a positive effect. These trials were of moderately-high methodological quality, but were restricted by small sample size. Results for both vitamin B6 and evening primrose oil were inconsistent.

Authors' conclusions
Further studies of greater sample size are required before firm conclusions regarding the role of calcium, magnesium and vitamin E can be drawn. Likewise, further evaluation of evening primrose oil may be needed before dismissing it as a potential form of treatment. It is becoming clear that vitamin B6 is not an effective form of PMS treatment despite its widespread use. It is difficult to offer recommendations confidently based on the current literature on nonprescription treatment of PMS.

CRD commentary
By limiting the search to MEDLINE and English language publications, it is quite probable that some articles may have been overlooked. The inclusion of a search of AMED would have enhanced this review. Few details are provided on the participants included. The only meaningful conclusion to be drawn from this review is that further research into the role of nonprescription treatments for PMS is required.

Bibliographic details

PubMedID
7950392

Other publications of related interest

Indexing Status
Subject indexing assigned by NLM

MeSH
Complementary Therapies /methods /standards; Female; Humans; Premenstrual Syndrome /therapy; Research /standards; Self Medication; Treatment Outcome

AccessionNumber
Date bibliographic record published
30/04/1997

Date abstract record published
30/04/1997

Record Status
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.