Valerian for insomnia: a systematic review of randomized clinical trials

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Authors' objectives
To review the evidence for the effects of the herb valerian on insomnia.

Searching
A range of electronic databases was searched from their inception to May 1999, and the reference lists of retrieved papers were checked for further publications. Manufacturers of valerian products and experts in the field were contacted for further published and unpublished material. There were no restrictions on the language of publication.

Study selection
Study designs of evaluations included in the review
Only randomised, placebo-controlled double-blind trials were eligible for inclusion in the review.

Specific interventions included in the review
The trials needed to examine valerian (Valeriana officinalis). Three trials considered the cumulative effects of valerian administered over consecutive days, whilst six measured acute responses to single doses. The doses ranged from 60 to 1,215 mg/day.

Participants included in the review
No inclusion criteria were stated in terms of the participants. The participants included chronically ill patients in geriatric hospitals for whom difficulty in sleeping was one of a number of complaints, elderly female poor sleepers, patients with non-organic insomnia who were not suffering from depression, mild insomnia sufferers and volunteers without documented sleep problems.

Outcomes assessed in the review
To be eligible, the trials needed to have measured the effect of valerian preparations on sleep. The outcomes measured in the trials included sleep latency and quality, total sleep time and the amount of rapid eye movement (REM) sleep. Where found, adverse events were also highlighted.

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
Methodological quality was assessed using a published scale that considers the potential bias of a study through flaws in randomisation, lack of blinding, and study withdrawals and drop-outs. The authors did not state how the papers were assessed for quality, or how many reviewers performed the quality assessment.

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

Methods of synthesis
How were the studies combined?
The studies were combined in a narrative summary.

How were differences between studies investigated?
Differences between the studies were discussed within the text of the report.

**Results of the review**

Nine trials (reported in 8 papers) with a total of 390 participants were included.

Three trials were of acceptable methodological quality, scoring five out of five. The remainder generally had scores of one or two; the exception was one trial that was not reported in full, thus preventing a quality score from being assigned. None of the trials reported checks on the success of blinding, raising the possibility of the treatment arms being discovered. Few of the trials checked for confounding factors such as pre-bedtime activities, or food and drink intake. Only two trials reported monitoring of compliance. None of the studies reported a power calculation and six trials had fewer than 15 participants.

Three trials investigated the effect of valerian following repeated administration: one methodologically rigorous trial found improvements in various sleep-related parameters; another reported superior sleep latency and duration by 2 weeks; the third (pilot study) suggested an increase of slow wave sleep after 1 and 8 days of valerian, but no improvement on other measures. Of the six trials investigating responses to single doses, three reported positive results whilst three showed no difference between valerian and placebo (the latter three were all conducted in healthy volunteers without documented sleep problems).

Few adverse events of valerian were reported, and those that were reported were mild and similar to those experienced with placebo.

**Authors' conclusions**

The evidence for valerian as a treatment for insomnia was promising but not conclusive. Valerian may have both acute and cumulative effects on sleep, but not all of the trials had positive findings.

**CRD commentary**

The review addressed a clear question and stated broad inclusion criteria for the participants, interventions, study designs and outcomes. However, the inclusion of healthy volunteers with no documented sleep problems alongside participants with recognised insomnia is questionable. The search covered a range of databases and attempts were made to include unpublished and foreign language research. Study quality was assessed using a validated scale and the results of the better quality studies were highlighted. It was unclear whether more than one reviewer carried out aspects of the review process (e.g. data extraction and validation), which may otherwise have introduced bias into this process. The authors' results appeared to support their conclusions. However, the authors pointed out that many of the trials were small and probably underpowered, thus highlighting the need for further, more methodologically rigorous trials in participants with documented insomnia.

**Implications of the review for practice and research**

Practice: The authors did not state any implications for practice.

Research: The authors identified a need for further, methodologically rigorous trials to determine the efficacy of valerian as a treatment for insomnia. Such trials would need to examine both the acute and repeated effects of valerian and to determine the optimal treatment dose. To improve on current research, the trials would need to be adequately powered, control for confounding variables and use validated outcome measures. Adverse events should also be considered more fully.

**Bibliographic details**

Other publications of related interest
This additional published commentary may also be of interest. Pelletier KR. Inconclusive data for valerian. FACT 2000;5:129.

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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.