



HerbClip™

Mariann Garner-Wizard
Heather S Oliff, PhD

Shari Henson
Marissa Oppel-Sutter, MS

Erin Miner
Risa Schulman, PhD

Executive Editor – Mark Blumenthal

Managing Editor – Lori Glenn

Consulting Editors – Dennis Awang, PhD, Thomas Brendler, Francis Brinker, ND, Mark Dreher,
Steven Foster, Risa Schulman, PhD

Assistant Editor – Tamarind Reaves *Production* – George Solis

AMERICAN
BOTANICAL
COUNCIL

**File: ■ Lavender (*Lavandula angustifolia*)
■ Anxiety**

HC 051254-454

Date: August 15, 2012

RE: Review of Studies Assessing the Effect of Lavender on Anxiety

Perry R, Terry R, Watson LK, Ernst E. Is lavender an anxiolytic drug? A systematic review of randomised clinical trials. *Phytomed*. June 15, 2012;19(8-9):825-835.

Oral, olfactory, and topical lavender (*Lavandula angustifolia*) is used for its anxiolytic and calming properties. Lavender contains linalool and linalyl acetate, which may be responsible for its anxiolytic properties. The purpose of this systematic review was to critically evaluate the data from randomized, clinical trials (RCTs) of all types of lavender preparations (oral, olfactory, and topical) for the treatment of anxiety.

MEDLINE, EMBASE, PsycINFO, AMED, CINAHL, The Cochrane Library, and the ISI Web of Knowledge databases were searched from inception to December 2010. Lavender and anxiety or stress were the search terms, along with 74 other possible combinations of related search terms. Reference lists of the selected articles were also searched. The authors included only RCTs in which human subjects with or without clinical anxiety were treated with any type of lavender monopreparation, and those that reported validated measures of anxiety or stress as an endpoint, standardized measures of anxiety, or physiological measures of stress. There were no language restrictions. Methodological quality was assessed with the Jadad score (0 to 5, with 5 being the highest quality). A meta-analysis was not possible because of the heterogeneity of the included studies.

The literature search identified 440 potentially relevant articles, but only 15 RCTs met the inclusion criteria. The 15 trials included a total of 1565 subjects (n = 16-340 per study), originated from 6 countries, and all were written in English. The methodological quality was mostly poor; only two studies had a Jadad score of 4, two studies had a score of 2, 9 studies had a score of 1, and two studies had a score of 0.

Eight studies evaluated inhalation of lavender, with four of the studies reporting a positive finding on at least one anxiety measure. Four of the inhalation studies did not demonstrate an effect. All of the inhalation studies were of poor quality, which limits the value and credibility of the studies. Two studies used aromatherapy massage. One of the two studies found a positive effect compared with no massage, but there was no difference when lavender oil massage was compared with control oil massage. The

second study found no effect of massage with lavender oil compared with massage without the lavender. Both aromatherapy massage studies were of poor quality, according to the authors. One study used an Ayurvedic oil-dripping technique where lavender oil was poured over the forehead. There was no significant difference between lavender oil and the carrier oil on anxiety levels. One study used bathing in lavender oil compared to bathing without oil. There was no significant difference between treatment groups in anxiety scores.

Three studies evaluated oral lavender. Two of these studies received a Jadad score of 4. In a double-blind RCT, an oral lavender oil preparation (Silexan[®]; Dr. Willmar Schwabe GmbH; Karlsruhe, Germany) was as effective as the anxiolytic lorazepam. In a placebo-controlled, double-blind randomized trial, oral lavender oil capsules (Silexan) decreased 'subsyndromal' anxiety disorder (according to the DSM-IV or ICD-10) symptoms significantly more than placebo ($P < 0.01$). A third study (of poorer quality) conducted with healthy subjects concluded that oral lavender may have an effect on general anxiety states but not when the levels of anxiety get too high.

Only 5 of the 15 studies recorded adverse events. Patients treated with oral lavender reported adverse gastrointestinal effects (details not reported), although in one of the high-quality clinical trials, the quantity of the adverse events was comparable to the placebo group. The current data from the clinical trials under review suggest that lavender seems to be a well-tolerated alternative to benzodiazepines. Nonetheless, the authors state that lavender should be used with caution because lavender oil can be a powerful allergen.

The authors caution that all of the results should be considered in the context of their methodological limitations. Although there may be beneficial effects of lavender on anxiety measures, methodological issues limit the extent to which firm conclusions can be drawn. The authors state, "The evidence for oral lavender is promising but, until independent replications emerge with long-term follow-up data, remains inconclusive." They conclude that the use of any other form of lavender (aromatherapy, inhalation, and massage) is not currently supported by good evidence of efficacy. To elucidate the therapeutic value of lavender as an anxiolytic, future trials must be methodologically rigorous.

—Heather S. Oliff, PhD

The American Botanical Council has chosen not to reprint the original article.

The American Botanical Council provides this review as an educational service. By providing this service, ABC does not warrant that the data is accurate and correct, nor does distribution of the article constitute any endorsement of the information contained or of the views of the authors.

ABC does not authorize the copying or use of the original articles. Reproduction of the reviews is allowed on a limited basis for students, colleagues, employees and/or members. Other uses and distribution require prior approval from ABC.