

# A Multi-Center, Double-Blind, Randomised Study of the Lavender Oil Preparation Silexan in Comparison to Lorazepam for Generalized Anxiety Disorder

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## Abstract

Generalized and persistent anxiety, accompanied by nervousness and other symptoms (Generalised Anxiety Disorder, GAD) is frequent in the general population and leads to benzodiazepine usage. Unfortunately, these substances induce sedation and have a high potential for drug abuse, and there is thus a need for alternatives. As the anxiolytic properties of lavender have already been demonstrated in pharmacological studies and small-scale clinical trials, it was postulated that lavender has a positive effect in GAD. A controlled clinical study was then performed to evaluate the efficacy of silexan, a new oral lavender oil capsule preparation, versus a benzodiazepine. In this study, the efficacy of a 6-week-intake of silexan compared to lorazepam was investigated in adults with GAD. The primary target variable was the change in the Hamilton Anxiety Rating Scale (HAM-A-total score) as an objective measurement of the severity of anxiety between baseline and week 6. The results suggest that silexan effectively ameliorates generalized anxiety comparable to a common benzodiazepine (lorazepam). The mean of the HAM-A-total score decreased clearly and to a similar extent in both groups (by 11.3+/-6.7 points (45%) in the silexan group and by 11.6+/-6.6 points (46%) in the lorazepam group, from 25+/-4 points at baseline in both groups). During the active treatment period, the two HAM-A subscores "somatic anxiety" (HAM-A subscore I) and "psychic anxiety" (HAM-A subscore II) also decreased clearly and to a similar extent in both groups. The changes in other subscores measured during the study, such as the SAS (Self-rating Anxiety Scale), PSWQ-PW (Penn State Worry Questionnaire), SF 36 Health survey Questionnaire and Clinical Global Impressions of severity of disorder (CGI item 1, CGI item 2, CGI item 3), and the results of the sleep diary demonstrated comparable positive effects of the two compounds. In conclusion, our results demonstrate that silexan is as effective as lorazepam in adults with GAD. The safety of silexan was also demonstrated. Since lavender oil showed no sedative effects in our study and has no potential for drug abuse, silexan appears to be an effective and well tolerated alternative to benzodiazepines for amelioration of generalised anxiety.

## Similar articles

- [Silexan, an orally administered Lavandula oil preparation, is effective in the treatment of 'subsyndromal' anxiety disorder: a randomized, double-blind, placebo controlled trial.](#) Kasper S, Gastpar M, Müller WE, Volz HP, Möller HJ, Dienel A, Schläfke S. *Int Clin Psychopharmacol*. 2010 Sep;25(5):277-87. doi: 10.1097/YIC.0b013e32833b3242. PMID: 20512042 Clinical Trial.
- [An orally administered lavandula oil preparation \(Silexan\) for anxiety disorder and related conditions: an evidence based review.](#) Kasper S. *Int J Psychiatry Clin Pract*. 2013 Nov;17 Suppl 1:15-22. doi: 10.3109/13651501.2013.813555. Epub 2013 Aug 3. PMID: 23808618 Review.
- [Efficacy and safety of silexan, a new, orally administered lavender oil preparation, in subthreshold anxiety disorder - evidence from clinical trials.](#) Kasper S, Gastpar M, Müller WE, Volz HP, Möller HJ, Dienel A, Schläfke S. *Wien Med Wochenschr*. 2010 Dec; 160(21-22):547-56. doi: 10.1007/s10354-010-0845-7. PMID: 21170695 Review.
- [Silexan in anxiety disorders: Clinical data and pharmacological background.](#) Kasper S, Müller WE, Volz HP, Möller HJ, Koch E, Dienel A. *World J Biol Psychiatry*. 2018 Sep; 19(6):412-420. doi: 10.1080/15622975.2017.1331046. Epub 2017 Jun 19. PMID: 28511598 Review.
- [Lavender oil preparation Silexan is effective in generalized anxiety disorder--a randomized, double-blind comparison to placebo and paroxetine.](#) Kasper S, Gastpar M, Müller WE, Volz HP, Möller HJ, Schläfke S, Dienel A. *Int J Neuropsychopharmacol*. 2014 Jun;17(6):859-69. doi: 10.1017/S1461145714000017. Epub 2014 Jan 23. PMID: 24456909 Clinical Trial.

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- [Efficacy and safety of lavender essential oil \(Silexan\) capsules among patients suffering from anxiety disorders: A network meta-analysis.](#) Yap WS, Dolzhenko AV, Jalal Z, Hadi MA, Khan TM. *Sci Rep*. 2019 Dec 2;9(1):18042. doi: 10.1038/s41598-019-54529-9. PMID: 31792285 Free PMC article.

- [Lavender \(\*Lavandula angustifolia\* Mill.\) Essential Oil Alleviates Neuropathic Pain in Mice With Spared Nerve Injury.](#) Sanna MD, Les F, Lopez V, Galeotti N. *Front Pharmacol.* 2019 May 9;10:472. doi: 10.3389/fphar.2019.00472. eCollection 2019. PMID: 31143116 Free PMC article.
- [Lavandula angustifolia Essential Oil and Linalool Counteract Social Aversion Induced by Social Defeat.](#) Caputo L, Reguilon MD, Miñarro J, De Feo V, Rodriguez-Arias M. *Molecules.* 2018 Oct 19;23(10):2694. doi: 10.3390/molecules23102694. PMID: 30347669 Free PMC article.
- [Pharmacotherapy for generalized anxiety disorder in adult and pediatric patients: an evidence-based treatment review.](#) Strawn JR, Geraciotti L, Rajdev N, Clemenza K, Levine A. *Expert Opin Pharmacother.* 2018 Jul;19(10):1057-1070. doi: 10.1080/14656566.2018.1491966. PMID: 30056792 Free PMC article. Review.
- [Essential oil of lavender in anxiety disorders: Ready for prime time?](#) Malcolm BJ, Tallian K. *Ment Health Clin.* 2018 Mar 26;7(4):147-155. doi: 10.9740/mhc.2017.07.147. eCollection 2017 Jul. PMID: 29955514 Free PMC article.
- [Effect of Lavender \(\*Lavandula angustifolia\*\) Essential Oil on Acute Inflammatory Response.](#) Cardia GFE, Silva-Filho SE, Silva EL, Uchida NS, Cavalcante HAO, Cassarotti LL, Salvadego VEC, Spironello RA, Bersani-Amado CA, Cuman RKN. *Evid Based Complement Alternat Med.* 2018 Mar 18;2018:1413940. doi: 10.1155/2018/1413940. eCollection 2018. PMID: 29743918 Free PMC article.
- [Herbal medicine for depression and anxiety: A systematic review with assessment of potential psycho-oncologic relevance.](#) Yeung KS, Hernandez M, Mao JJ, Haviland I, Gubili J. *Phytother Res.* 2018 May;32(5):865-891. doi: 10.1002/ptr.6033. Epub 2018 Feb 21. PMID: 29464801 Free PMC article. Review.
- [Efficacy of Silexan in subthreshold anxiety: meta-analysis of randomised, placebo-controlled trials.](#) Möller HJ, Volz HP, Dienel A, Schläfke S, Kasper S. *Eur Arch Psychiatry Clin Neurosci.* 2019 Mar;269(2):183-193. doi: 10.1007/s00406-017-0852-4. Epub 2017 Nov 17. PMID: 29150713 Free PMC article.
- [Treatment of anxiety disorders.](#) Bandelow B, Michaelis S, Wedekind D. *Dialogues Clin Neurosci.* 2017 Jun;19(2):93-107. PMID: 28867934 Free PMC article. Review.
- [Neuroprotective and Anti-Aging Potentials of Essential Oils from Aromatic and Medicinal Plants.](#) Ayaz M, Sadiq A, Junaid M, Ullah F, Subhan F, Ahmed J. *Front Aging Neurosci.* 2017 May 30;9:168. doi: 10.3389/fnagi.2017.00168. eCollection 2017. PMID: 28611658 Free PMC article. Review.
- [Exploring Pharmacological Mechanisms of Lavender \(\*Lavandula angustifolia\*\) Essential Oil on Central Nervous System Targets.](#) López V, Nielsen B, Solas M, Ramírez MJ, Jäger AK. *Front Pharmacol.* 2017 May 19;8:280. doi: 10.3389/fphar.2017.00280. eCollection

2017. PMID: 28579958 Free PMC article.

- [Biological Activities of Essential Oils: From Plant Chemoecology to Traditional Healing Systems.](#) Sharifi-Rad J, Sureda A, Tenore GC, Daglia M, Sharifi-Rad M, Valussi M, Tundis R, Sharifi-Rad M, Loizzo MR, Ademiluyi AO, Sharifi-Rad R, Ayatollahi SA, Iriti M. *Molecules*. 2017 Jan 1;22(1):70. doi: 10.3390/molecules22010070. PMID: 28045446 Free PMC article. Review.
- [Mood Therapeutics: Novel Pharmacological Approaches for Treating Depression.](#) Henter ID, de Sousa RT, Gold PW, Brunoni AR, Zarate CA Jr, Machado-Vieira R. *Expert Rev Clin Pharmacol*. 2017 Feb;10(2):153-166. doi: 10.1080/17512433.2017.1253472. Epub 2017 Jan 16. PMID: 27781556 Free PMC article. Review.
- [A Systematic Review of the Anxiolytic-Like Effects of Essential Oils in Animal Models.](#) de Sousa DP, de Almeida Soares Hocayen P, Andrade LN, Andreatini R. *Molecules*. 2015 Oct 14;20(10):18620-60. doi: 10.3390/molecules201018620. PMID: 26473822 Free PMC article. Review.