

Essential Oils for Relaxation Research Guide



Lavender Inhalation for Sleep & Anxiety

1. Karadag, E., Samancioglu, S., Ozden, D., & Bakir, E. (2017). Effects of aromatherapy on sleep quality and anxiety of patients. *Nursing in Critical Care*, 22(2), 105–112. <https://doi.org/10.1111/nicc.12198>

Summary: A study investigated the effects of inhaled lavender (*Lavandula angustifolia*) on sleep quality and anxiety in hospitalized coronary intensive care patients. The 30 patients in the experimental group were instructed to inhale lavender from a gauze pinned to their upper gown for approximately 20 minutes before nighttime sleep, while the 30 patients in the control group received routine care. All 60 patients completed sleep quality and anxiety surveys prior to treatment and at 15 days after. Results of essential oil treatment showed significant reduction in anxiety and improved quality of sleep.

Lavender & Geranium Massage for Anxiety and Depression

1. Xiong, M., Li, Y., Tang, P., Zhang, Y., Cao, M., Ni, J., & Xing, M. (2018). Effectiveness of aromatherapy massage and inhalation on symptoms of depression in Chinese community-dwelling older adults. *The Journal of Alternative and Complementary Medicine*, 24(7), 717–724. <https://doi.org/10.1089/acm.2017.0320>

Summary: A randomized control study investigated the effects of aromatherapy massage on 13 of 25 female participants whose children were being followed in a psychiatric clinic for attention-deficit/hyperactivity disorder (ADHD). Participants received twice-weekly 40-minute massages with a 4% dilution of lavender (*Lavandula angustifolia*) and geranium (*Pelargonium graveolens*), while the control group received nothing. Measurements showed anxiety and depression were significantly reduced after the 4-week completion in the experimental group. Additionally, brain-derived neurotrophic factor (BDNF), which is found to be lower in people with depression, was significantly increased at 4 weeks. Short-term positive effects were shown with measurements of brain waves and cortisol levels.

Bergamot for Stress and Anxiety

1. Watanabe, E., Kuchta, K., Kimura, M., Rauwald, H. W., Kamei, T., & Imanishi, J. (2015). Essential oil aromatherapy on mood states, parasympathetic nervous system activity, and salivary cortisol levels in 41 healthy females. *Complementary Medicine Research*, 22(1), 43–49. <https://doi.org/10.1159/000380989>

Summary: A random crossover study in which 41 healthy volunteers were exposed to all three experimental groups investigating the effects of bergamot (*Citrus bergamia*) on psychological stress and anxiety. Groups consisted of rest alone, rest with water vapor diffused, and rest with water vapor and bergamot diffused. Significant decreased cortisol levels and subjective surveys of mood states and anxiety after 15 minutes of bergamot diffusion indicated this could be an effective, quick intervention for stress reduction. Heart rate variability also showed positive changes indicating an increase in the parasympathetic (rest-relaxation) response.



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Lavender Patches for Anxiety

1. Wotman, M., Levinger, J., Leung, L., Kallush, A., Mauer, E., & Kacker, A. (2017). The efficacy of lavender aromatherapy in reducing preoperative anxiety in ambulatory surgery patients undergoing procedures in general otolaryngology. *Laryngoscope Investigative Otolaryngology*, 2(6), 437–441. <https://doi.org/10.1002/lio2.121>

Summary: A convenience sampling study investigating lavender (*Lavandula angustifolia*) delivered via standardized patches for ambulatory surgery patients resulted in moderate self-reports of decreased anxiety. Fifty patients in the experimental group with the lavender patch applied to their upper body were compared to the control group of 50 patients receiving routine nursing care. Results of the visual analog scale showed the lavender group's average anxiety rating decreased by 1 point, whereas the control group decreased by 0.1 point. Addition questions asked of the experimental group indicated that patients felt calmer.



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