

# Essential Oils for Fatigue Research Guide



## Effect of inhaled essential oils on mental exhaustion and moderate burnout: A small pilot study

1. Varney, E., & Buckle, J. (2012). effect of inhaled essential oils on mental exhaustion and moderate burnout: A small pilot study. *The Journal of Alternative and Complementary Medicine*, 19(1), 69–71. <https://doi.org/10.1089/acm.2012.0089>

Summary: A small convenient sample of 14 people investigated the effects of an inhaler blend of 4 drops jojoba oil, 10 drops peppermint, 8 drops basil, and 2 drops *Helichrysum* in an inhaler stick compared to a control of 4 drops jojoba oil and 20 drops of rosewater also in an inhaler stick. Participants in both the experimental and control groups inhaled 3 breaths from each nostril every hour during the working day, which averaged 7 times per day. Participants recorded self-assessments of mental fatigue or mild burnout 3 times per day for 3 weeks. The first week was baseline, the second week included intervention with the inhaler, and the third week was the washout period without the inhaler. Results showed a reduction in symptoms during the second week with the inhaler for both groups; the essential oil group, however, indicated a reduction of symptoms twice that of the control group.

## The effectiveness of in-vehicle peppermint fragrance to maintain car driver's alertness

1. Mahachandra, M., Yassierli, & Garnaby, E. D. (2015). The effectiveness of in-vehicle peppermint fragrance to maintain car driver's alertness. *Procedia Manufacturing*, 4(I ESS), 471–477. <https://doi.org/10.1016/j.promfg.2015.11.064>

Summary: Twelve (12) male participants volunteered to investigate peppermint vapor effects compared to the test without peppermint on driver alertness. Measurements of brainwaves with an electroencephalograph (EEG) were used to objectively measure alertness levels in both tests during the 30-minute test period as participants drove a simulation car after 11:00 p.m. The experimental phase exposed participants to a continuous diffusion of peppermint vapors in the car, consisting of 30.70% L-Menthol, 27.08% L-Menthone, 4.95% Menthyl Acetate, 4.35% Iso-Menthone, 4.79% Mentha Furan, and 5.76% Cineol. This was compared to the same test with the same participants without using peppermint diffusion. Results indicated there was a decrease of alertness in both tests with a slight decrease (not significant) noted in the peppermint group. This study suggested that other studies be done using intermittent peppermint instead of continuous diffusion of peppermint.



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## Preliminary investigation of the effect of peppermint oil on an objective measure of daytime sleepiness

1. Norrish, M. I. K., & Dwyer, K. L. (2005). Preliminary investigation of the effect of peppermint oil on an objective measure of daytime sleepiness, *55*, 291–298.  
<https://doi.org/10.1016/j.ijpsycho.2004.08.004>

Summary: Twenty (20) undergraduate recruited students were randomly assigned to control and experimental groups to investigate the effects of peppermint (*Mentha x piperita*) essential oil on daytime sleepiness. A pad with undiluted peppermint was placed 3 cm from one nostril for participants as they sat in a comfortable chair in a darkened room for 11 minutes. The experimental group participants were seated in the same manner in a dark room without essential oils. Pupillary measurements thought to objectively measure sleepiness indicated that the peppermint group experienced significant less sleepiness than the control group.

## Effect of aromatherapy on cognitive test anxiety among nursing students

1. Johnson, C. E. (2014). Effect of aromatherapy on cognitive test anxiety among nursing students. *Alternative and Complementary Therapies*, *20*(2), 84–87.  
<https://doi.org/10.1089/act.2014.20207>

Summary: Thirty-nine (39) nursing students were randomized to either the experimental group, exposed to diffused lemon (*Citrus limon*), or the control group without essential oils during a 25-minute test. Results indicated a decrease in cognitive test anxiety, but no difference in test scores.



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