

## Eucalyptus

There is a comprehensive summary of human trials demonstrating the beneficial effects of 1,8-cineole in various respiratory conditions in the Handbook of Essential Oils edited by Can Baser and Buchbauer (2010). According to results, 1,8-cineole can be effectively applied in the treatment of asthma, acute or chronic bronchitis, COPD, common cold and sinusitis.

1,8-cineole, a major constituent present in volatile oil of *Eucalyptus globulus*, is a strong inhibitor of cytokines that might be suitable for long term treatment of airway inflammation in bronchial asthma and other steroid-sensitive disorders. (Juergens et. al., 1998).

Studies suggest that eucalyptus oil inhalation effectively reduced subjective pain and blood pressure in patients after Total Knee Replacement (TKR) surgery. Previous studies have also demonstrated antinociceptive (pain-relieving) properties of 1,8-cineole, suggesting a morphine-like effect in relieving pain. The study also found out that eucalyptus oil's pain-relieving effects may be associated with the involvement of the central neurotransmitter system. Pain and stress after TKR surgery are believed to affect the central and sympathetic nervous systems, increasing blood pressure and pulse. The group treated with eucalyptus oil inhalations demonstrated a significant reduction in blood pressure, indicating that eucalyptus oil may promote relaxation by reducing sympathetic activity while augmenting parasympathetic activity during continuous passive motion (CPM) after TKR. (Jun et al., 2013)

Eucalyptus is also analgesic and volatile in nature that's why it is easily absorbed by the muscles and nerves. Volatile monoterpenoid alcohol (Terpineol) is a component of *E. globulus*, which is widely used in aromatherapy. Terpineol induced dose-dependent blockade is induced by terpineol through the compound action potential (CAP) (Moreira, 2001).

### NOTES:

1. Can Baser K. H., Buchbauer G. (2010) Handbook of Essential Oils. Science, Technology, and Application. CRC Press, Taylor & Francis Group: New York. [Handbook of Essential Oils: Science, Technology, and Applications, Second Edition](#)
2. Juergens U.R., Stober M, Vetter H. (1998) Inhibition of cytokine production and arachidonic acid metabolism by eucalyptol (1,8-cineole) in human blood monocytes in vitro. Eur. J. Med. Res. 3: 508-510. <https://pubmed.ncbi.nlm.nih.gov/9810029/>
3. Jun, Y. S., Kang, P., Min, S. S., Lee, J. M., Kim, H. K., & Seol, G. H. (2013). Effect of Eucalyptus Oil Inhalation on Pain and Inflammatory Responses after Total Knee Replacement: A Randomized Clinical Trial. Evidence-Based Complementary and Alternative Medicine, 2013, 1–7. <https://doi.org/10.1155/2013/502727>
4. Moreira, M. R., Cruz, G. M., Lopes, M. S., Albuquerque, A. A., & Leal-Cardoso, J. H. (2001). Effects of terpineol on the compound action potential of the rat sciatic nerve. Brazilian journal of medical and biological research, 34(10), 1337–1340. <https://doi.org/10.1590/s0100-879x2001001000015>