

# The effect of essential oil on heart rate and blood pressure among solus por aqua workers.

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**Background:** Aromatherapy is widely used around the world for stress relief. Whether exposure to essential oil increases the risk of cardiovascular events is still unknown. The purpose of this study was to investigate the effect of essential oil on heart rate and blood pressure among solus por aqua (spa) workers. **Methods:** We recruited 100 healthy workers from various spa centres in Taipei, Taiwan. Between July and August of 2010, three repeated measurements - resting heart rate (HR), systolic blood pressure (SBP), and diastolic blood pressure (DBP) - were taken of each spa worker in our study room. Participants were exposed to essential oil vapour generated from an ultrasonic atomizer in the study room for two consecutive hours. The total volatile organic compound (VOC) level in the study room was measured during the study period. We used a linear mixed-effect model to determine the association between the total VOC level and the participants' HR, SBP, and DBP. **Results:** For the times from 15 to 60 min after start of exposure, we found that the VOC level was significantly associated with reduced 15-min mean BP and HR. After exposure for more than 1 hour, from 75 to 120 min after start of exposure, we found that the VOC levels were associated with increased 15-min mean BP and HR. **Conclusions:** Exposure to essential oil for 1 hour was found to be an effective method of relaxation, as indicated by decreases in the HR and BP. Prolonged exposure for longer than 1 hour to essential oils may be harmful to cardiovascular health among spa workers.

Eur J Prev Cardiol. 2012 Nov 29. Chuang KJ, Chen HW, Liu IJ, Chuang HC, Lin LY. Dept of Public Health, School of Med., College of Med./School of Public Hlth College of Public Health and Nutrition, Taipei Med. Uni., Taipei, Taiwan.

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