

Sleep promotion and skin condition improvement using (-)-Bornyl acetate

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This study aimed to investigate whether (-)-bornyl acetate promoted sleep and had any concomitant effects on skin condition. Healthy women over 50 years of age participated in our experiment for 2 weeks. Each of them inhaled water mist with/without (-)-bornyl acetate every night for 1 h after they went to bed. They maintained logs of sleep time and wake time, measured their skin's moisture level, and constantly wore a triaxial accelerometer to record daily physical activity. They filled out questionnaires regarding sleep quality and skin condition on the first and last day of the experiment. The results showed that subjects in the group inhaling water mist with (-)-bornyl acetate went to bed about 20 min earlier and showed an increase in sleep duration for 2 weeks. In addition, the subjective measures of oil and moisture content of the facial skin improved. These findings suggest that (-)-bornyl acetate affected the temporal characteristics of sleep and improved the subjective assessments of oil and moisture content of the skin. Moreover, we observed that skin moisture of eye area was related to sleep length.