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File: ■ Aromatherapy
■ Energy Levels
■ Covid-19

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RE: Aromatherapy with Thyme, Orange, Clove, and Frankincense Essential Oils May Reduce Fatigue in Post-COVID-19 Women

Hawkins J, Hires C, Keenan L, Dunne E. Aromatherapy blend of thyme, orange, clove bud, and frankincense boosts energy levels in post-COVID-19 female patients: a randomized, double-blinded, placebo controlled clinical trial. *Complement Ther Med*. August 2022;67:102823. doi:10.1016/j.ctim.2022.102823.

Severe acute respiratory syndrome coronavirus 2 (SARs-CoV-2 virus), also known as COVID-19, has affected over 250 million people worldwide as of November 2021. SARs-CoV-2 virus causes an acute respiratory infection that can cause not only fatal complications but also long-term effects. The long-term effects are estimated to affect 23% to 73% of patients and include up to 50 different symptoms. Some of these symptoms are mild and include fatigue, cognitive impairment, and headaches, and some are severe and include difficulty breathing, post-traumatic stress disorder, hypertension, and chest pain. These effects reduce the quality of life for patients who had COVID-19 and impact employment and mental wellbeing. Of all the symptoms, fatigue is the most common and affects 58% of patients. Aromatherapy utilizes the olfactory effects of essential oils, which are lipid soluble volatile compound from plants. These compounds can affect the body's limbic system and, in turn, affect emotions and behaviors. Aromatherapy has demonstrated in past trials to boost energy levels for cardiac patients, hypothyroid patients, and patients undergoing hemodialysis. Essential oils that have shown to boost energy include thyme (*Thymus vulgaris*, Lamiaceae), orange (*Citrus sinensis*, Rutaceae) peel, clove (*Eugenia caryophyllus*, Myrtaceae) bud, and frankincense (*Boswellia carterii*, Burceraceae). The authors propose a randomized double blind, placebo-controlled trial to evaluate the effects of thyme, orange peel, clove, and frankincense essential oils on energy levels of female patients who had COVID-19.

This trial was conducted in the United States, and it was not specified when the study took place. Inclusion criteria included female patients between the ages of 19 and 49 years who had a positive COVID-19 test between December 1, 2020 and March 31, 2021, were recovered five or more months before the start of the intervention, and were experiencing fatigue. Exclusion criteria included allergies to the essential oils, serious long-term symptoms of COVID-19, were going to receive a vaccine during or within a week before intervention, had fatigue before having COVID-19, have hyperthyroidism, pregnant, trying to conceive, or were breastfeeding.

Patients were randomized into two groups. The intervention group received a 15 mL bottle with a blend of thyme, orange peel, clove, and frankincense essential oils. The essential oil mixture, Longevity™, was provided by Young Living Essential Oils (Lehi, Utah). The placebo group was given an odorless coconut oil (Young Living Essential Oils). The patients were to use four drops of their bottle of oil and place it on a small paper scent tester strip. The patient had to sit in a calm, quiet place and inhale the oil that was two inches from their nose with deep breaths for fifteen minutes in the morning and evening for 14 days.

The primary outcome was assessed using the Multidimensional Fatigue Symptom Inventory Short Form (MFSI). This measured fatigue for patients with chronic illness. The Patient Health Questionnaire-9 (PSQ-9) was also utilized for measuring depression, changes to sleeping habits, eating habits, difficulty concentrating, and satisfaction with life.

Of the 230 patients who requested information about the study, 153 were screened, and 44 were included in the study. One participant did not begin the study, two violated protocols, and one withdrew due to side effects. This left a total 40 patients with 20 in each group. No differences were found between the two groups for socioeconomic or anthropomorphic status. The average length of COVID-19 infection was 2.3 weeks. Most participants lost both their sense of taste and smell.

There was a significant improvement in fatigue in the essential oil group compared to the placebo group after two weeks ($P = 0.020$). When using the MFSI, there was significant improvement for global fatigue ($P = 0.010$), behavioral fatigue ($P = 0.044$), general fatigue ($P = 0.030$), mental fatigue ($P = 0.003$), and vigor ($P = 0.022$) in the essential oil group compared to the placebo group after two weeks. It was found that somatic fatigue was related to body mass index and race, affective fatigue was related to employment status and duration of COVID-19, cognitive fatigue was associated with employment status and body mass index, and emotional fatigue was connected to race, employment status and duration of COVID-19. Physical fatigue was only affected by baseline scores.

PSQ-9 scores were significantly lower in the essential oil group compared to placebo ($P = 0.002$). There was one adverse event reported. One participant reported headache and withdrew on day 13. The participant was experiencing headaches before the study began. No other adverse events were reported.

The authors conclude the use of the essential oil blend Longevity may help boost energy levels in women recovering from COVID-19. Limitations include only having women in the study who lived in the United States; however, this was due to women experiencing fatigue more than men. The other limitation is that the long-term effects and duration of post-COVID-19 challenges are not yet known. The authors suggest aromatherapy as an easy and effective intervention.

The authors state no conflict of interest; however, the study was funded by Young Living Essential Oils.

—Dani Hoots

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