

Nature Therapy

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Abstract

Six-to-seven million years have passed since a subset of primates became humans. Because we humans have spent more than 99.99% of our evolutionary history in a natural environment, it is considered that we are essentially adaptive to nature. The gap between the natural setting, in which our physiological functions adapted, and the highly urbanized and artificial setting that we inhabit nowadays is a contributing cause of the “stress state” that modern humans experience. In recent years, scientific evidence supporting the physiological effects of relaxation caused by natural stimuli has accumulated. We investigated the physiological effects of nature therapy, which comprised flower therapy, wooden material therapy, park therapy, and forest therapy, using both field and laboratory experiments. We found that with exposure to these natural stimuli, prefrontal cortex activity (brain activity), sympathetic nervous activity, blood pressure, heart rate (autonomic nervous activity), and cortisol (stress hormone) decreased, and parasympathetic nervous activity (autonomic nervous activity) increased. These results indicate that nature therapy brought about a physiological relaxation in modern, stressed people. We believe that nature therapy will play an increasingly important role in preventive medicine in the near future.

Keywords

Natural environment, Physiological relaxation, Evidence-based medicine (EBM), Preventive medicine

References

1. **H. Ikei**, C. Song and Y. Miyazaki. Physiological effects of touching hinoki cypress (*Chamaecyparis obtusa*), Journal of Wood Science (JWS), in press, 2018
2. **H. Ikei**, C. Song and Y. Miyazaki. Physiological effects of wood on humans: A review. JWS., 2017
3. **H. Ikei**, C. Song and Y. Miyazaki. Physiological effects of touching wood. International Journal of Environmental Research and Public Health (IJERPH), 14(7): 801, 2017
4. **H. Ikei**, C. Song and Y. Miyazaki. Physiological effects of touching coated wood. IJERPH, 2017
5. C. Song, **H. Ikei** and Y. Miyazaki. Sustained effects of a forest therapy program on the blood pressure of office workers. Urban Forestry & Urban Greening, 27: 246-252, 2017
6. C. Song, **H. Ikei**, Y. Miyazaki et al. Effects of viewing forest landscape on middle-aged hypertensive men. Urban Forestry & Urban Greening, 21: 247-252, 2017
7. C. Song, M. Igarashi, **H. Ikei** and Y. Miyazaki. Physiological effects of viewing fresh red roses. Complementary Therapies in Medicine, 35: 78-84, 2017