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A controlled trial of timed bright light and negative air ionization for treatment of winter depression.

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BACKGROUND: Artificial bright light presents a promising nonpharmacological treatment for seasonal affective disorder. Past studies, however, have lacked adequate placebo controls or sufficient power to detect group differences. The importance of time of day of treatment--specifically, morning light superiority--has remained controversial. METHODS: This study used a morning x evening light crossover design balanced by parallel-group controls, in addition to a nonphotic control, negative air ionization. Subjects with seasonal affective disorder (N = 158) were randomly assigned to 6 groups for 2 consecutive treatment periods, each 10 to 14 days. Light treatment sequences were morning-evening, evening-morning, morning-morning, and evening-evening (10,000 lux, 30 min/d). Ion density was 2.7 x 10(6) (high) or 1.0 x 10(4) (low) ions per cubic centimeter (high-high and low-low sequences, 30 min/d in the morning). RESULTS: Analysis of depression scale percentage change scores showed low-density ion response to be inferior to all other groups, with no other group differences. Response to evening light was reduced when preceded by treatment with morning light, the sole sequence effect. Stringent remission criteria, however, showed significantly higher response to morning than evening light, regardless of treatment sequence. CONCLUSIONS: Bright light and high-density negative air ionization both appear to act as specific antidepressants in patients with seasonal affective disorder. Whether clinical improvement would be further enhanced by their use in combination, or as adjuvants to medication, awaits investigation.

J Altern Complement Med 1995 Jan;1(1):87-92 Related Articles, Links

Treatment of seasonal affective disorder with a high-output negative ionizer.

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This study was designed to evaluate the antidepressant effect of negative ions in the ambient air as a potential treatment modality for seasonal affective disorder. Twenty-five subjects with winter depression underwent a double-blind controlled trial of negative ions at two exposure densities, 1 x 10(4) ions/cm3 or 2.7 x 10(6) ions/cm3, using an electronic negative ion generator with wire corona emitters. Home treatments were taken in the early morning for 30 min over 20 days, followed by withdrawals. The severity of depressive symptoms (prominently including the reverse neurovegetative symptoms of hypersomnia, hyperphagia, and fatigability) decreased selectively for the group receiving high-density treatment. Standard depression rating scale assessments were corroborated by clinical impressions. When a remission criterion of 50% or greater reduction in symptom frequency/severity was used, 58% of subjects responded to high-density treatment while 15% responded to low-density treatment (chi 2 = 5.00, df = 1, p = 0.025). There were no side effects attributable to the treatment, and all subjects who responded showed subsequent relapse during withdrawal. Treatment with a high-density negative ionizer appears to act as a specific antidepressant for patients with seasonal affective disorder. The method may be useful as an alternative or supplement to light therapy and medications.

Aviat Space Environ Med 1982 Aug;53(8):822-3 Related Articles, Links

Subjective response to negative air ion exposure.

Buckalew LW, Rizzuto A.

This study investigated specific subjective or psychological effects of relatively long exposure to negative ions generated by a conventional air purification device. Subjects--24 males matched for age, education, physical condition, and smoking habits--were divided into a control (N = 12) and an ion exposure group (N = 12). The groups were subjected to 6 h normal and negatively charged atmospheres, respectively. The tests used were the Taylor Manifest Anxiety Scale (TMAS) and a self-report mood index. The analysis of TMAS change scores clearly showed no effect of negative ion exposure on anxiety. Analysis of mood index data showed significant changes in the subjective perception of both physiological state (relaxation increased) and psychological state (irritability, depression, and tenseness decreased while calmness and stimulation increased.