

Controlled trial of bright light and negative air ions for chronic depression

Published online by Cambridge University Press: 12 May 2005

NAMNI GOEL, MICHAEL TERMAN, JUAN SU TERMAN, MARIANA M. MACCHI and
JONATHAN W. STEWART

Article

Metrics

Article contents

[Get access](#)

Abstract

Background. This randomized controlled trial investigates the efficacy of two non-pharmacologic treatments, bright light and high-density negative air ions for non-seasonal chronic depression. Both methods have shown clinical success for seasonal affective disorder (SAD).

Method. Patients were 24 (75%) women and 8 (25%) men, ages 22–65 years (mean age \pm s.d., 43.7 \pm 12.4 years), with Major Depressive Disorder, Single Episode (DSM-IV code, 296.2), Chronic (episode duration [ges]2 years). Patients were entered throughout the year and randomly assigned to exposure to bright light (10000 lux, $n=10$), or high-density (4.5×10^{14} ions/s flow rate, $n=12$) or low-density (1.7×10^{11} ions/s, $n=10$, placebo control) negative air ions. Home treatment sessions occurred for 1 h upon awakening for 5 weeks. Blinded raters assessed symptom severity weekly with the Structured Interview Guide for the Hamilton Depression Rating Scale – Seasonal Affective Disorder (SIGH-SAD) version. Evening saliva samples were obtained before and after treatment for ascertainment of circadian melatonin rhythm phase.

Results. SIGH-SAD score improvement was 53.7% for bright light and 51.1% for high-density ions v. 17.0% for low-density ions. Remission rates were 50%, 50% and 0% respectively. The presence or severity of atypical symptoms did not predict response to either treatment modality, nor were phase advances to light associated with positive response.

Conclusions. Both bright light and negative air ions are effective for treatment of chronic depression. Remission rates are similar to those for SAD, but without a seasonal dependency or apparent mediation by circadian rhythm phase shifts. Combination treatment with antidepressant drugs may further enhance clinical response.

Type

Research Article

Information

[Psychological Medicine](#), [Volume 35](#), [Issue 7](#), July 2005, pp. 945 - 955

DOI: <https://doi.org/10.1017/S0033291705005027>

Copyright

2005 Cambridge University Press

69

[Cited by](#)

Related content

AI-generated results: by

UNSILO

Article

Light Therapy for Seasonal and Nonseasonal Depression: Efficacy, Protocol, Safety, and Side Effects

Michael Terman and Juan Su Terman

[CNS Spectrums](#)

Published online: 7 November 2014

Article

Is Seasonal Affective Disorder a Disorder of Circadian Rhythms?

Paul H. Desan and Dan A. Oren

[CNS Spectrums](#)

Published online: 7 November 2014

Article**Update on the Biology of Seasonal Affective Disorder**

Chang-Ho Sohn and Raymond W. Lam

[CNS Spectrums](#)

Published online: 7 November 2014

Article**Pharmacotherapy of Seasonal Affective Disorder**

Edda Pjrek, Dietmar Winkler and Siegfried Kasper

[CNS Spectrums](#)

Published online: 7 November 2014

Article**Will light brighten the future of the depressed patient?**

R.H. Van Den Hoofdakker and M.C.M. Gordijn

[Acta Neuropsychiatrica](#)

Published online: 18 September 2015

Article**Effects of fluoxetine versus bright light in the treatment of seasonal affective disorder**

S. RUHRMANN, S. KASPER, B. HAWELLEK, B. MARTINEZ, G. HÖFLICH, T. NICKELSEN and H.-J. MÖLLER

[Psychological Medicine](#)

Published online: 1 July 1998

Article**The lack of sustained effect of bright light in non-seasonal major depression**[Psychological Medicine](#)

Published online: 7 June 2006

Article**Melatonin Rhythms in Seasonal Affective Disorder**

S. A. Checkley, D. G. M. Murphy, M. Abbas, M. Marks, F. Winton, E. Palazidou, D. M. Murphy, C. Franey, C. Binme, J. Arendt and D. Campos Costa

[The British Journal of Psychiatry](#)

Published online: 2 January 2018

Article**Seasonal affective disorder**

I. Rodin and C. Thompson

[Advances in Psychiatric Treatment](#)

Published online: 2 January 2018

Article

Quality of life as an outcome indicator in patients with seasonal affective disorder: results from the Can-SAD study

ERIN E. MICHALAK, GREG MURRAY, ANTHONY J. LEVITT, ROBERT D. LEVITAN, MURRAY W. ENNS, RACHEL MOREHOUSE, EDWIN M. TAM, AMY CHEUNG and RAYMOND W. LAM

Psychological Medicine

Published online: 20 November 2006