Negative air ionization therapy
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Negative air ionization therapy is the use of air ionisers as an experimental non-pharmaceutical treatment for seasonal affective disorder (SAD) and mild depression. Research seems to indicate that high doses work better than placebo but low doses do not.

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Research

For SAD, a randomized controlled trial (RCT) comparing high ($4.5 \times 10^{14}$ ions/second) and low ($1.7 \times 10^{11}$ ions/second) flow rate negative air ionization with bright light therapy found that posttreatment improvement results were 57.1% for bright light (10,000 lux) compared with high-density ions, 47.9%; and low-density ions, 22.7%.[1] An older RCT conducted by the same authors also found air ionization effective for SAD at $2.7 \times 10^{6}$ ions/cm$^3$.[2] A 2007 review considers this therapy "under investigation", and suggests that it may be a helpful treatment for SAD.[3]

A RCT comparing the short-term effects of bright light, an auditory stimulus, and high- and low-density negative ions on mood and alertness in mildly depressed and non-depressed adults found that the three first (active) stimuli, but not the low-density placebo, reduced depression on the Beck Depression Inventory scale; the auditory stimulus, bright light and high-density ions all produced rapid mood changes—with small to medium effect sizes—in depressed and non-depressed subjects.[4]

As of 2009, the negative ion generators used are still undergoing multicenter phase II clinical trials.[5]

A separate randomized placebo-controlled study published in May 2010 found that the difference between high-density ion therapy and placebo (dim red light and low-density ions) was not statistically significant. The conclusion of this study was that bright white light therapy was significantly more effective than negative ion therapy for treating Seasonal Affective Disorder (SAD).[6]

Mechanism
Michael Terman, professor of clinical psychology in the Department of Psychiatry at Columbia University, who conducted the two studies on SAD, suggests that the mechanism responsible for the effect of this therapy on SAD is that the negative ion machines used in his studies are designed to mimic summer-like conditions by supplementing the sparse winter ion supply. He stresses however that although some air purifiers utilize negative ion technology, the dose of ions delivered by a typical air purifier is far too low for it to have an antidepressant effect.[7]

See also

- Ionized bracelet
- Earthing Therapy
- Water ionizer

References


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