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## **The Effects of Hyperbaric Oxygen on Rheumatoid Arthritis: A Pilot Study**

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### **Abstract**

**Background/objective:** This case series pilot study assessed the effects of hyperbaric oxygen therapy (HBO2) for treating rheumatoid arthritis (RA).

**Methods:** Ten RA subjects received 30 HBO2 treatments over 6 to 10 weeks. Serial rheumatologic evaluations (ie, the Disease Activity Scale [DAS28], the Routine Assessment of Patient Index Data 3, and the Pain and Sleep Quality Questionnaire) were completed at baseline, throughout the course of the study, and at the 6-month follow-up.

**Results:** There was a statistically significant effect of HBO2 therapy over time on the DAS28-Global Health ( $p = 0.01$ ), the DAS28-C-reactive protein ( $p = 0.002$ ), and the DAS28-erythrocyte sedimentation rate ( $p = 0.008$ ) measures; these analyses excluded 2 patients who were in clinical remission at baseline. Selected post hoc comparisons

showed significantly lower DAS28-Global Health, DAS28-C-reactive protein, and DAS28-erythrocyte sedimentation rate scores at 3 and 6 months relative to baseline. In addition, statistically significant decreases in pain as measured by the Routine Assessment of Patient Index Data 3 and Pain and Sleep Quality Questionnaire were observed at the end of HBO2 relative to baseline.

**Conclusions:** Hyperbaric oxygen therapy is effective for joint pain in patients with RA based on data from multiple, validated clinical measures. Further research with more subjects and the use of a control group is necessary.

Trial registration: [ClinicalTrials.gov NCT02984943](https://clinicaltrials.gov/ct2/show/study/NCT02984943).

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Conflict of interest statement

The authors declare no conflict of interest.