

[Relaxation response-based yoga improves functioning in young children with autism: A pilot study](#)

[Journal of Alternative and Complementary Medicine](#) 17 (11), pp. 1029-1035

**Journal of Alternative and Complementary Medicine**

Volume 17, Issue 11, 1 November 2011, Pages 1029-1035

---

Relaxation response-based yoga improves functioning in young children with autism: A pilot study

[Rosenblatt, L.E.](#)<sup>a</sup>, [Gorantla, S.](#)<sup>a b</sup>, [Torres, J.A.](#)<sup>a</sup>, [Yarmush, R.S.](#)<sup>a c</sup>, [Rao, S.](#)<sup>a d</sup>, [Park, E.R.](#)<sup>b e</sup>, [Denninger, J.W.](#)<sup>c e</sup>,  
[Benson, H.](#)<sup>c e</sup>, [Fricchione, G.L.](#)<sup>c e</sup>, [Bernstein, B.](#)<sup>a d</sup>, [Levine, J.B.](#)<sup>a c e</sup>  

<sup>a</sup> Department of Psychiatry, Saint Francis Hospital and Medical Center, Hartford, CT, United States

<sup>b</sup> Department of Psychiatry, University of Hartford, Hartford, CT, United States

<sup>c</sup> Benson-Henry Institute for Mind-Body Medicine, Massachusetts General Hospital, 151 Merrimac Street, Boston, MA 02114, United States

<sup>d</sup> Department of Psychiatry, University of Connecticut, Farmington, CT, United States

<sup>e</sup> Department of Psychiatry, Harvard Medical School, Boston, MA, United States

**Abstract**

**Objectives:** The study objectives were to develop and objectively assess the therapeutic effect of a novel movement-based complementary and alternative medicine approach for children with an autism-spectrum disorder (ASD).

**Design:** A within-subject analysis comparing pre- to post-treatment scores on two standard measures of childhood behavioral problems was used. **Settings and location:** The intervention and data analysis occurred at a tertiary care, medical school teaching hospital. **Subjects:** Twenty-four (24) children aged 3-16 years with a diagnosis of an ASD comprised the study group. **Intervention:** The efficacy of an 8-week multimodal yoga, dance, and music therapy program based on the relaxation response (RR) was developed and examined. **Outcome measures:** The study outcome was measured using The Behavioral Assessment System for Children, Second Edition (BASC-2) and the Aberrant Behavioral Checklist (ABC). **Results:** Robust changes were found on the BASC-2, primarily for 5-12-year-old children. Unexpectedly, the post-treatment scores on the Atypicality scale of the BASC-2, which measures some of the core features of autism, changed significantly ( $p=0.003$ ). **Conclusions:** A movement-based, modified RR program, involving yoga and dance, showed efficacy in treating behavioral and some core features of autism, particularly for latency-age children. © Copyright 2011, Mary Ann Liebert, Inc. 2011