**For Immediate Release**

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# Shriners Hospitals for Children Research Helps Determine Effectiveness of Bracing in Treating Scoliosis

*Shriners Hospitals for Children Physician leads portion of study published in New England Journal of Medicine*

**Tampa, Fla. (Oct. 2, 2013) –** Bracing in adolescents with idiopathic scoliosis reduces the likelihood that the condition will progress to the point that surgery is needed, according to a study published online in the New England Journal of Medicine. The work was supported by Shriners Hospitals for Children® and the National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS), part of the National Institutes of Health.

Scoliosis is a musculoskeletal disorder that causes an abnormal curve of the spine or backbone, causing the spine to look more like an "S" or a "C" rather than a straight line, typically affecting 1 in 1,000 children. Adolescent idiopathic scoliosis (AIS) is a curve with no known cause. Mild cases may only need observation by a physician. In more serious cases, especially when the patient is still skeletally immature, other treatments may be needed, such as bracing, or in very severe cases, surgery. However, the effectiveness of bracing for AIS has been in question.

Results of a multi-year study supported by Shriners Hospitals for Children, the National Institutes of Health, the Canadian Institutes of Health Research and other organizations recently published in the online edition of the *New England Journal of Medicine*, indicate bracing is effective.

"Knowing – with confidence - that bracing is effective changes the treatment paradigm," said Matthew Dobbs, M.D., orthopaedic surgeon at Shriners Hospitals for Children – St. Louis, and lead investigator for the Shriners Hospitals' portion of the study. "We can now say, for a specific patient population with AIS, that we can avoid the need for surgery through bracing."

The Bracing in Adolescent Idiopathic Scoliosis Trial (BrAIST) compared the risk of curve progression in adolescents with AIS who wore a brace with those who did not. The study included 383 subjects at 25 sites in the U.S. and Canada, including 78 patients from seven Shriners Hospitals for Children. Dr. Dobbs oversaw this portion of the study, including compiling data and reviewing recruitments.

In the trial, treatment (bracing or observation) was randomly assigned to approximately 40 percent of the participants, with the rest given their preference. Those receiving bracing wore the device for 18 hours daily. Treatment was considered successful if the subject reached skeletal maturity with their curve remaining under 50 degrees. In the combined groups in the study, 72 percent who received bracing were successful. Those who wore their brace an average of 13 hours daily had a success rate of 90 to 93 percent.

Results of the study have the potential to impact treatment standards for children with scoliosis, as well as effect information provided at screening clinics for the detection of scoliosis.

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"It will be our job as physicians to share this information and educate patients and families on the definitive, long-term positive effects of bracing for these patients," said Dr. Dobbs. "The results of this study are truly exciting – and ground-breaking. We thank Shriners Hospitals for Children, the NIH and everyone involved in supporting this work."

Dr. Dobbs is also a professor of orthopaedics at Washington University School of Medicine.

**Shriners Hospitals for Children** is changing lives every day through innovative pediatric specialty care, world-class research and outstanding medical education. Our 23 facilities, located in the United States, Canada and Mexico, provide advanced care for children with orthopedic conditions, burns, spinal cord injuries, and cleft lip and palate, regardless of the families' ability to pay.

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For more information on scoliosis in children and adolescents, visit http://www.niams.nih.gov/health_info/scoliosis/.

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*The http://www.clinicaltrials.gov identifier for the Bracing in Adolescent Idiopathic Scoliosis Trial (BrAIST) is NCT00448448.*

*The mission of the NIAMS, a part of the U.S. Department of Health and Human Services' National Institutes of Health, is to support research into the causes, treatment and prevention of carry out this research; and the dissemination of information on research progress in these diseases. For more information about the NIAMS, call the information clearinghouse at (301) 495-4484 or (877) 22-NIAMS (free call) or visit the NIAMS website at http://www.niams.nih.gov.*

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