

Neumeyer, Ann

Over the past 25 years as a child neurologist, Dr. Ann Neumeyer has demonstrated both passion and expertise in the treatment of children with neurodevelopmental disabilities such as autism spectrum disorder (ASD), and more specifically in the medical and neurological issues that present with autism. As medical director of the Lurie Center, a clinic that provides care for children and adolescents and adults with autism spectrum disorders from across the country where this program has been a member of the Autism Speaks/Autism Treatment Network. Through this and its HRSA funded Autism Intervention Research Program she and the network have worked to develop better care for children with ASD in North America. In addition, as a member the steering and executive steering committee of the HRSA funded Autism intervention research network in physical health, she has developed an extensive clinical research program that has worked to investigate and develop better care models for children with autism in North America, both through research in the more than 2000 patient database, as well as through individual research projects.

Her clinical observations have led to a strong interest in investigations of metabolic and bone development issues in children with ASD as well as neurologic and medical comorbidities of ASD.

Dr. Neumeyer published the first study examining bone density using DXA in prepubertal boys compared with a control population and demonstrated significant deficits at both the spine and the hip in boys with autism. This low bone density appeared to be related to nutritional deficiencies, reduced exercise activity and hormonal factors (such as elevations in cortisol). With these findings, she has continued to show both clinically significant risk of hip fractures and other fractures in children and adults with autism compared to controls. In her bone accrual study this past year she reported that bone accrual was similar in children with ASD compared with controls over a 4-year follow-up. However, the subjects with ASD, who started off with much lower bone density than controls, did not catch up for bone density to their control counterparts over the 4-year period of follow-up, suggesting that low bone mineral density may be a consequence of prepubertal factors such as low physical activity. In the first ever study of bone microarchitecture in children with ASD, Dr. Neumeyer reported microarchitecture impairment in children with ASD with reductions in bone strength estimates at the distal radius and distal tibia. These and others papers have been published in the Journal of Pediatrics, Bone, and the Journal of Autism and Developmental Disabilities. Dr. Neumeyer's research findings have set the stage for



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potentially larger studies, as well as relevant clinical recommendations for the care and treatment of bone health in persons with autism spectrum disorder.

Dr. Neumeyer is an Assistant Professor at Harvard Medical School and a valued and active member of the clinical staff in the Departments of Neurology and Pediatrics at Massachusetts General Hospital. She has unique expertise in bone issues related to autism, and is also a much sought after clinician in the field of pediatric neurology and autism. She serves on data safety and monitor reports for other clinical research programs within the hospital as well as outside the hospital. She serves as member of the Autism Consortium of Boston Research Steering Committee, the executive advisory board member for the Advocates for Autism of Massachusetts as well as a Governor's appointed member of the Massachusetts Autism Commission. She serves as an *ad hoc* reviewer on several journals including the Journal of Autism and Developmental Disabilities, Neurology and the New England Journal of Medicine. She is honored to become a member of the Society for Pediatric Research.