

years 9 months). Children with ASD had significantly greater passive joint mobility, more gait abnormalities, and walked on average 1.6 months later than their non-autistic peers. Gait abnormalities included wide-based, apraxic, posturing, clumsy and toe walking. This study indicates that ASDs affect a broader range of central nervous system circuitry than often appreciated. (Klein MS, et al. Abnormalities of joint mobility and gait in children with autism spectrum disorders. **Brain Dev** 2014 Feb;36(2):91-6).

COMMENTARY. Motor abnormalities in addition to sociability, communication, and restricted and repetitive behaviors should be examined in the clinical evaluation of a child suspected of having autism spectrum disorder. Hypotonia is commonly recorded in the neurological examination of a child with ASD. The most reliable estimation of tone is the resistance to passive movement of a limb [1]. The authors emphasize that hypotonia has multiple potential causes, and in children with ASD the relative contribution of peripheral ligamentous joint laxity, muscle disorder or central nervous system dysfunction was not determined.

**References.**

1. Denny-Brown D. Handbook of Neurological Examination and Case Recording. Cambridge, MA: Harvard University Press; 1965.

## **SLEEP PATTERNS AND AUTISM**

Investigators from University of Bristol, and other centers in the UK and Canada conducted a prospective study of sleep duration of children with an autism spectrum disorder (ASD) diagnosis at age 11 years (n=73). Parental reports of sleep duration collected by questionnaires at 8 time points from 6 months to 11 years showed that from age 30 months to 11 years, children with ASD slept for 17-43 min less each day than contemporary controls. In infancy, no significant difference in total sleep duration was apparent, but from 30 months of age, children with ASD had less nocturnal sleep than their peers. Night-time sleep duration was shortened by later bedtimes, earlier waking times and frequent waking (3 or more times a night). Age specific decreases of >1 SD in sleep duration was a predictor of ASD between 18 months and 30 months of age (p=0.04) and from 30 months to 42 months (p=0.02). (Humphreys JS, Gringras P, Blair PS, et al. Sleep patterns in children with autistic spectrum disorders: a prospective cohort study. **Arch Dis Child** 2014 Feb;99(2):114-8).

COMMENTARY. Sleep duration in children with ASD is reduced from 30 months of age and persists until adolescence. Changes in sleep patterns are most noticeable between 18 months and 3 and one half years. Children with ASD are reported to have reduced levels of circulating melatonin and disrupted circadian rhythms [1]. Melatonin should be considered in the treatment of sleep patterns in ASD children [2].

**References.**

1. Rossignol DA, Frye RE. Dev Med Child Neurol. 2011 Sep;53(9):783-92.
2. Malow B, et al. J Autism Dev Disord. 2012 Aug;42(8):1729-37.