

# National Center on Birth Defects and Developmental Disabilities

Annual Report | Fiscal Year 2013



## Understanding Autism to Help Children Live to the Fullest



[Autism spectrum disorder](#) and other developmental disabilities are some of the most significant child health issues facing families and our nation today. CDC's National Center on Birth Defects and Developmental Disabilities (NCBDDD) has accelerated the search for causes and ways to address the needs of families and communities. Better tracking, research, and improved early identification are leading us to a better understanding of autism spectrum disorder and better results for children.

### Budget

[Learn more about budget](#)

[Learn more about state funding](#)

### Accomplishments

- Worked with the Health Resources and Services Administration to release [data from a survey of parents](#) estimating that in 2011-2012, approximately 1 in 50 school-aged children had autism spectrum disorder. These data help us understand what families are experiencing and are further evidence that the estimated number of school-aged children with autism has increased.

### Video: Baby Steps



Watch this video in [English](#) or [Spanish](#) to learn about developmental milestones and what to do if you're worried about your child's development.

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- Released data and a [Community Report](#) from the [Autism and Developmental Disabilities Monitoring \(ADDM\)](#) Cerebral Palsy Network. NCBDDD's report showed that the prevalence of autism spectrum disorder among children with [cerebral palsy](#) was higher than among their peers without cerebral palsy—about 7% vs. 1%. These data also showed that cerebral palsy remains the most common motor disability in childhood, estimating that 1 in 323 children has cerebral palsy. Information about the co-occurrence of autism spectrum disorder and other conditions like cerebral palsy can help direct research into shared risk factors and causes.
- Reported on the methods of the [Study to Explore Early Development](#) (SEED): a first step in releasing results of this important study which will help us learn more about factors that may put children at risk for autism spectrum disorder and other developmental disabilities.
- Supported the Autism Society and the Arc of the United States to work with diverse communities across the country to conduct a series of community engagement activities focused on the reduction of disparities in autism spectrum disorder identification and services.
- Promoted integration of "[Learn the Signs. Act Early.](#)" messages and materials into national-level programs such as Early Head Start, Women, Infants, and Children (WIC), and YMCA. A pilot project in St. Louis, Missouri WIC clinics successfully incorporated developmental monitoring using "Learn the Signs. Act Early." materials into daily operations; a larger demonstration project built on this model is currently being replicated in four counties in Missouri. NCBDDD also updated and launched new "[Learn the Signs. Act Early.](#)" [developmental milestone checklists](#) for parents.



**HELPING CHILDREN**  
LIVE TO THE FULLEST  
BY UNDERSTANDING AUTISM

**1 IN 68**

**HAS AUTISM  
SPECTRUM  
DISORDER**

Medical costs for children with autism are estimated to be



**SIX TIMES  
HIGHER**

than for children  
without autism

Early, intensive behavioral intervention can result in positive outcomes for children with developmental disabilities and might save more than

**\$650,000**

per child with autism over their lifetime

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### Looking to the Future

Autism spectrum disorder and other developmental disabilities are important public health concerns, and NCBDDD's Division of Birth Defects and Developmental Disabilities works to understand these conditions to help children live to the fullest. In 2014, NCBDDD will release new data from the ADDM Network on the number and characteristics of children with autism spectrum disorder to inform service needs and document progress towards early identification goals. Through SEED, we will learn more about factors that may put children at risk for autism spectrum disorder and other developmental disabilities. Through "Learn the Signs. Act Early." we will continue to promote developmental monitoring, screening, and follow-up to improve early identification of children with autism and other developmental disabilities so children and families can get the services and support they need.

#### Did You Know?

- About 1 in 6 children aged 3 through 17 years have 1 or more developmental disabilities.<sup>1</sup>
- In addition to medical costs, intensive behavioral interventions for children with autism spectrum disorder cost \$40,000 to \$60,000 per child per year.<sup>3</sup>

### Notable 2013 Scientific Publications

Anderson C, et al. [Occurrence and family impact of elopement in children with autism spectrum disorders](#). *Pediatrics*. 2012 Nov;130(5):870-877.

Atladóttir HÓ, et al. [Autism after infection, febrile episodes, and antibiotic use during pregnancy: an exploratory study](#). *Pediatrics*. 2012 Dec;130(6):e1447-e1454.

Berry RJ, et al. [Periconceptional folic acid and risk of autism spectrum disorders](#). *Journal of the American Medical Association*. 2013 Feb;309(6):611-613.

Blumberg SJ, et al. [Changes in prevalence of parent-reported autism spectrum disorder in school-aged U.S. children: 2007 to 2011–2012](#). *National Health Statistics Reports*. 2013 Mar 20;65.

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Christensen D, et al. [Prevalence of cerebral palsy, co-occurring autism spectrum disorders, and motor functioning - Autism and Developmental Disabilities Monitoring Network, USA, 2008](#). *Developmental Medicine and Child Neurology*. 2013 Oct;56(1):59-65.

Christensen J, et al. [Prenatal valproate exposure and risk of autism spectrum disorders and childhood autism: a population-based study](#). *Journal of the American Medical Association*. 2013 Apr;309(16):1696-1703.

Kancherla V, et al. [Childhood vision impairment, hearing loss and co-occurring autism spectrum disorder](#). *Disability and Health Journal*. 2013 Oct;6(4):333-342.

Maenner MJ, et al. [Frequency and pattern of documented diagnostic features and the age of autism identification](#). *Journal of the American Academy of Child and Adolescent Psychiatry*. 2013 Apr;52(4):401-413.

Peacock G, et al. (2013). "Learn the Signs. Act Early." The public health approach to the early identification of children at risk for autism spectrum disorder and other developmental disabilities. In Doehring P, Becker-Cottrill B, (editors). [Autism Services Across America: Road Maps for Improving State and National Education, Research, and Training Programs](#). pp 231-247. Baltimore, MD: PH Brooks Publishing Co.

Rice CE, et al. "[Evaluating changes in the prevalence of autism spectrum disorders.](#)" In Tulchinsky, et al (editors). *Public Health Reviews: Mental Health as a Public Health Issue*. 2013;34(2). pp 634-655. France: EHESP Presses.

Schendel DE, et al. [The Study to Explore Early Development \(SEED\): A multisite epidemiologic study of autism by the Centers for Autism and Developmental Disabilities Research and Epidemiology \(CADDRE\) Network](#). *Journal of Autism and Developmental Disorders*. 2012 Oct; 42(10):2121-2140.

## References

1. Boyle CA, Boulet S, Schieve L, Cohen RA, Blumberg SJ, Yeargin-Allsopp M, Visser S, Kogan MD. Trends in the Prevalence of Developmental Disabilities in US Children, 1997–2008. *Pediatrics*. 2011 Jun;126(6):1034-1042. Epub 2011 May 23.

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2. Shimabukuro TT, Grosse SD, Rice C. Medical expenditures for children with an autism spectrum disorder in a privately insured population. *J Autism Dev Disord*. 2008 Mar;38(3):546-52. Epub 2007 Aug 10.
3. Mendah, D., Grosse, S.D., Peacock, G., & Mandell, D.S. (2011). The economic costs of autism: A review. In D. Amaral, D. Geschwind, & G. Dawson (Eds.), *Autism spectrum disorders* (pp. 1347-1360). Oxford: Oxford University Press.

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