
The Centers for Disease Control and Prevention (CDC) Autism Prevalence Estimates

Autism spectrum disorders (ASDs) are a group of developmental disabilities that often are diagnosed during early childhood and can cause significant social, communication, and behavioral challenges over a lifetime. People with ASDs have a different way of understanding and reacting to people and events in their world. These differences are caused by the way their brain processes information. This group of developmental disabilities is considered a “spectrum” of disorders. This means ASDs affect each person in different ways, and symptoms can range from mild to severe. People with ASDs share some similar symptoms, such as problems with social interaction, problems with communication, and highly focused interests or repetitive activities.

The Centers for Disease Control and Prevention (CDC) estimates that about 1 in 88 children has been identified with an autism spectrum disorder (ASD). CDC’s estimate comes from the Autism and Developmental Disabilities Monitoring (ADDM) Network, which monitors the number of 8-year-old children with ASDs living in diverse communities throughout the United States. In 2007, CDC’s ADDM Network first reported that about 1 in 150 children had an ASD (based on children who were 8 years old in 2002). Then, in 2009, the ADDM Network reported that 1 in 110 children had an ASD (based on children who were 8 years old in 2006). Most recently, the ADDM Network reported that 1 in 88 children had an ASD (based on children who were 8 years old in 2008). This means that the estimated prevalence of ASDs increased 23% during 2006 to 2008 and 78% during 2002 to 2008 (1–4).

At CDC, we understand that people may be concerned when they hear these study results and we have been working to understand what’s causing the increase. We know that some of the increase is probably due to the way children are identified and served in local communities, although exactly how much is due to these factors is unknown. To understand more, we need to keep accelerating our research. We recognize that people need answers now, and we hope these updated prevalence estimates will help communities to plan better for the supports and services that families need. We are working, together with our partners, on the search for risk factors and causes and to address the growing needs of individuals, families, and communities affected by ASDs. Here are the key findings from this report:

- More children were diagnosed at earlier ages—a growing number of them by 3 years of age. Still, most children were not diagnosed until after they were 4 years of age. On average, diagnosis was a bit earlier for children with autistic disorder (4 years) than for children with the more broadly defined autism spectrum diagnoses or pervasive developmental disorder not otherwise specified (4 years, 5 months), and diagnosis was much later for children with Asperger disorder (6 years, 3 months).

- As has been detailed in previous reports, we also found that almost five times as many boys were being identified with ASDs as girls (1 in 54 compared to 1 in 252). Research exploring why there are differences in the identified prevalence among males and females is ongoing and knowing that the conditions are more common among boys can help direct our search for causes.

- The largest increases over time were among Hispanic and Black children. We suspect that some of this was due to better screening and diagnosis. However, this finding explains only part of the increase over time, as more children were identified in all racial and ethnic groups.

- The majority (62%) of children the ADDM Network identified as having ASDs did not have intellectual disability. The largest increases during 2002 to 2008 were among children without intellectual disability (those having IQ scores higher than 70), although there were increases in the identified prevalence of ASDs at all levels of intellectual ability.

While many studies of ASDs have focused on small groups of individuals, the ADDM Network monitors these conditions among thousands of children from diverse communities across the country. This ongoing, population-based approach allows the ADDM Network to monitor changes in the identification of ASDs and better describe the characteristics of children with these conditions, such as the average age of diagnosis and disparities in identification. These data help direct our research into potential risk factors and can help communities direct their outreach efforts to those who need it most.

In summary:

We are finding that more children than ever before are being diagnosed with ASDs and they are not being diagnosed as early as they could be. The emotional and financial tolls on families and communities are staggering and therapies can cost thousands of dollars. We recognize that families are frustrated and want answers now. We will continue working to provide essential data on ASDs, to understand the recent increase and why some children are more likely to be identified than others, and to improve early identification in hopes that all children have the opportunity to thrive.