

## What is autism spectrum disorder?

Autism spectrum disorder (ASD) is a neurodevelopmental disorder characterized by deficits in social interactions and social communication and by restricted, repetitive patterns of behavior.

## What are the symptoms of ASD?

- **Social Interaction and Social Communication:** Child shows little interest in making friends; initiates social interactions primarily to have immediate needs met (e.g., to get food, preferred toy); and tends not to share accomplishments and experiences. Other symptoms include lack of eye contact, and absent or limited and atypical gestures (e.g., using someone's hand as a tool for opening the door). Loss of language occurs in some cases.
- **Restricted Interests and Repetitive Behaviors:** Intensely repetitive motor movements or use of objects; child is consumed with a single item, idea, or person; experiences difficulty with changes in the environment or transitioning from one situation to another; may have frequent tantrums; and may be aggressive or self-injurious.

## How prevalent is ASD?

The number of diagnosed cases of autism and related disorders has dramatically increased over the past decade. According to the most recent study conducted by the Centers for Disease Control and Prevention (2014), ASD occurs in approximately one in every 68 births. ASD is one of the most common serious developmental disabilities, and is almost five times more likely to occur in boys than in girls.

## How is ASD diagnosed?

There are no medical tests for diagnosing ASD, but when parents become concerned about developmental delays in children, they should consult a physician. He or she can rule out various potential medical causes, such as hearing problems. Before a child can be diagnosed, that child should be evaluated by an autism specialist. Such a person may be a psychologist, psychiatrist, pediatric neurologist, or developmental pediatrician who specializes in diagnosing and treating children with ASD. Best practice guidelines identify the following six components of a comprehensive diagnostic evaluation for autism:

- Parent or caregiver interview
- Review of relevant medical, psychological, and/or school records

- Cognitive/developmental assessment
- Direct play observation
- Measurement of adaptive functioning
- Comprehensive medical examination

ASD diagnostic criteria are described by the American Psychiatric Association (APA) in its Diagnostic & Statistical Manual of Mental Disorders (DSM-V). Qualified professionals provide these diagnoses when symptoms of ASD (social interaction and social communication, and repetitive behaviors) are present in ranges that are inappropriate for the child's age and developmental level.

ASD is diagnosed when all these symptoms are present to some degree. A diagnosis also includes a specification of severity. Specifically, qualified professionals will use information gathered during the diagnostic assessment to indicate the level of support an individual with ASD requires: Level 1 Requiring Support; Level 2 Requiring Substantial Support; Level 3 Requiring Very Substantial Support.

## What causes ASD?

Although one specific cause of ASD is not known, current research links autism to biological or neurological differences in the brain. Autism is believed to have a genetic basis, although no single gene

has been directly linked to the disorder. Researchers are using advanced brain-imaging technology to examine factors that may contribute to the development of autism. MRI (Magnetic Resonance Imaging) and PET (Positron Emission Tomography) scans can show abnormalities in the structure of the brain, with significant cellular differences in the cerebellum.

## What treatments are recommended?

Selecting the most appropriate treatment for an individual with an ASD is complicated. The following factors should influence treatment selection: (a) evidence of intervention effectiveness; (b) professional judgment and data-based clinical decision making; (c) values and preferences of families (including the individual on the autism spectrum); and (d) capacity to accurately implement an intervention.

The National Standards Project of the National Autism Center has identified interventions that have sufficient evidence to show they are effective for individuals with ASD. We recommend considering these interventions unless they are deemed inappropriate based on one of the other factors influencing treatment selection.

## How can parents find the right program?

Parents should look for programs that:

- involve direct consultation by senior clinicians (doctoral-level or board certified professionals)
- include staff who can clearly describe the design and implementation of an intervention
- integrate research findings with professional judgment and data-based clinical decision making, the values and preferences of families, and capacity to effectively implement interventions

- address the comprehensive needs of individuals on the autism spectrum with sufficient intensity so children and adolescents can make meaningful progress

## Additional resources include:

- National Autism Center ([www.nationalautismcenter.org](http://www.nationalautismcenter.org))\*
- Autism Society of America ([www.autism-society.org](http://www.autism-society.org))
- Centers for Disease Control and Prevention ([www.cdc.gov](http://www.cdc.gov) [key word “autism”])
- Doug Flutie Jr. Foundation ([www.dougflutiejr.org](http://www.dougflutiejr.org))
- Financial Planning ([www.specialneedsplanning.com](http://www.specialneedsplanning.com))

*\* The National Autism Center is May Institute’s Center for the Promotion of Evidence-based Practice. It is a nonprofit organization dedicated to serving children and adolescents with ASD by providing reliable information, promoting best practices, and offering comprehensive resources for families, practitioners, and communities.*

## Facts about ASD:

- ▶ occurs in one in every 68 births
- ▶ is more common than pediatric cancer, diabetes, and AIDS combined
- ▶ occurs in all races, ethnicities, and social groups
- ▶ currently has no known cause or cure
- ▶ effective treatments are available for children, adolescents, and adults on the autism spectrum
- ▶ early intervention services are critical to a child’s long-term success

[www.mayinstitute.org](http://www.mayinstitute.org)

*May Institute is a nonprofit organization that provides educational, rehabilitative, and behavioral healthcare services to individuals with autism spectrum disorder (ASD) and other developmental disabilities, brain injury, cognitive disabilities, and behavioral needs. Since its founding 60 years ago, May Institute has evolved into an award-winning national network that serves thousands of individuals and their families every year at more than 160 service locations across the country. The Institute operates several schools for children and adolescents with ASD and other developmental disabilities. They are located in Randolph, West Springfield, and Woburn, Mass., and Santa Cruz, Calif.*

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