

the facts about

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. The most recent studies (CDC, 2014) report that 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 autism, 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.

additional resources

American Academy of Pediatrics
www.aap.org (key word "autism")

Autism Consortium
www.autismconsortium.org

Autism Society of America
www.autism-society.org

Autism Speaks
www.autismspeaks.org

Centers for Disease Control and Prevention
www.cdc.gov (key word "autism")

May Institute
www.mayinstitute.org

National Institute of Mental Health
www.nimh.nih.gov (key word "autism")

Organization for Autism Research
www.researchautism.org

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 interventions are recommended?

Intervention selection is complicated. It should be made by a team that can consider the unique needs and history of the individual with ASD along with the environments in which he or she lives. In all cases, we strongly encourage decision-makers to select an evidence-based practice approach.

The National Autism Center published Phase 2 of the National Standards Project in 2015. It identifies 14 Established Interventions that have sufficient evidence of effectiveness. We recommend the decision-making team give serious consideration to these interventions unless they are deemed inappropriate based on other factors influencing treatment selection.

For children, adolescents, and young adults under 22 years of age, the 14 Established Interventions are: Behavioral Interventions; Cognitive Behavioral Intervention Package; Comprehensive Behavioral Treatment for Young Children; Language Training (Production); Modeling; Natural Teaching Strategies; Parent Training; Peer Training Package; Pivotal Response Training; Schedules; Scripting; Self-Management; Social Skills Package; and Story-based Intervention.

The only intervention to be identified as Established for individuals ages 22 years and older is Behavioral Interventions. The Behavioral Intervention category consists of applied behavior analytic interventions to increase adaptive behaviors and decrease challenging behaviors.

How do you find the right program?

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

About the National Autism Center

The National Autism Center is May Institute's Center for the Promotion of Evidence-based Practice. It is a nonprofit organization dedicated to supporting effective, evidence-based treatment approaches for autism spectrum disorder (ASD) and to providing direction to families, practitioners, organizations, policy-makers, and funders. The Center's goal is to serve individuals with ASD by responding to the rising demand for reliable information and by providing comprehensive resources for families and communities.



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