

Autism: The Basics

WHAT IS AUTISM SPECTRUM DISORDER?

Autism spectrum disorder (ASD) is a developmental syndrome characterized by a wide range of social and emotional behaviors that can interfere with everyday function and vary in severity. The condition is considered developmental because the behaviors usually appear in the first 24 months of life. The prevalence may be as high as 1 in every 59 children, according to the US Centers for Disease Control and Prevention (CDC). Boys are four times as likely as girls to be on the spectrum. Coexisting conditions can include attention deficit hyperactivity disorder (ADHD), anxiety, depression, and epilepsy.

WHAT ARE THE SYMPTOMS?

Children may avoid eye contact, have difficulty reading social cues (tone and facial expressions), and have an overly intense focus on objects and topics. Repetitive and restrictive behaviors are also typical, including rocking, repeating words and phrases, difficulty accepting changes in routine, and intense sensitivity to sensory input.

WHAT ARE THE CAUSES?

No direct cause has been identified, but risk factors include having older parents, genetic conditions such as Down syndrome and fragile X syndrome, extremely low birth weight, and having a sibling with ASD. An interplay of genetic and environmental factors also may contribute. Imaging studies have found that differences in the brains of people on the spectrum begin early in the development process.

HOW IS IT DIAGNOSED?

Pediatricians perform autism-specific screening at 18 and 24 months. If concerns arise, a child is referred to a team of experts, which may include a neurologist, psychologist, psychiatrist, and speech therapist, who conduct a neurologic assessment and cognitive and language testing. ASD is typically diagnosed by 24 months of age, but older children and adults can be diagnosed with ASD, as their symptoms may have been mild or otherwise escaped medical scrutiny. Older children are usually diagnosed after parents and teachers express concerns about their social, emotional, and academic development. Adults are typically diagnosed when they report symptoms that interfere with their ability to function in social and work settings. Strict diagnostic criteria should be applied by a doctor with training in autism before labeling the patient autistic. Pediatric psychologists or developmental pediatricians usually perform the testing.

WHAT TREATMENTS ARE AVAILABLE?

No cure exists for the disorder, but various therapeutic approaches can ease symptoms and improve functioning. Early and intensive intervention can maximize the potential for learning to speak, walk, interact socially, and master everyday skills that allow for healthy routines and relationships. Speech and language therapy, occupational therapy, and physical therapy are strongly recommended to encourage cognitive and social development among peers. Support groups help prepare children for social interactions and independence. Some medications can help manage aggression and coexisting conditions such as ADHD, anxiety, and depression.

WHAT RESEARCH IS BEING DONE?

The National Institute of Neurological Disorders and Stroke (ninds.nih.gov) established the Interagency Autism Coordinating Committee 20 years ago to enhance the pace and quality of autism research. Current topics include the relationship between the brain and microorganisms in the digestive system, genetic factors, and the use of scans to map the ways the brain responds to social and physical stimuli.

For more *Brain & Life* articles on autism, go to BrainLifeMag.org/Autism.

For resources and support, contact:

- Autism Centers of Excellence: bit.ly/NICHD-ACE; 800-370-2943
- Autism Society: autism-society.org; 800-328-8476
- Autism Speaks: autismspeaks.org; 888-288-4762; 888-772-9050 (en Español)
- Global and Regional Asperger's Syndrome Partnership: grasp.org; 888-474-7277
- National Institute of Child Health and Human Development: bit.ly/NICHD-Autism; 800-370-2943
- National Institute of Neurological Disorders and Stroke: ninds.nih.gov; 800-352-9424

PUBLICACIONES EN ESPAÑOL: *Brain & Life* en español y Basics en español disponibles ya en BrainandLife.org; trastornos del espectro autista: bit.ly/NINDS-Autismo-Espanol

SOURCES: NATIONAL LIBRARY OF MEDICINE; NATIONAL INSTITUTE OF NEUROLOGICAL DISORDERS AND STROKE; *BRAIN & LIFE*.