

# Autism Spectrum Disorders

Autism spectrum disorder (ASD) is a broad term used to describe a group of **neurodevelopmental disorders**.

These disorders are characterized by problems with **communication and social interaction**. People with ASD often demonstrate **restricted, repetitive, and stereotyped interests or patterns of behavior**.

ASD is found in individuals around the world, regardless of race, culture, or economic background. According to the **Centers for Disease Control and Prevention (CDC)**, autism does occur more often in boys than in girls, with a 4 to 1 male-to-female ratio. The CDC estimated in 2014 that nearly 1 in 59 children have been identified with ASD.

## Types of autism

The DSM-5 currently recognizes **five different ASD subtypes**. They are:

- **with or without accompanying intellectual impairment**
- **with or without accompanying language impairment**
- **associated with a known medical or genetic condition or environmental factor**
- **associated with another neurodevelopmental, mental, or behavioral disorder**
- **with catatonia** (abnormality of movement and behavior)

Someone can be diagnosed with one or more specifiers.

Prior to the DSM-5, people on the autism spectrum may have been diagnosed with one of the following disorders:

- autistic disorder
- **Asperger's syndrome**
- pervasive development disorder-not otherwise specified (PDD-NOS)
- childhood disintegrative disorder

# Symptoms of autism

Autism symptoms typically become clearly evident during early childhood, between 12 and 24 months of age. However, symptoms may also appear earlier or later.

Early symptoms may include a marked delay in language or social development.

The DSM-5 divides symptoms of autism into two categories:

## **Problems with communication and social interaction include:**

- **issues with communication, including difficulties sharing emotions, sharing interests, or maintaining a back-and-forth conversation**
- **issues with nonverbal communication, such as trouble maintaining eye contact or reading body language**
- **difficulties developing and maintaining relationships**

## **Restricted or repetitive patterns of behavior or activities include:**

- **repetitive movements, motions, or speech patterns**
- **rigid adherence to specific routines or behaviors**
- **an increase or decrease in sensitivity to specific sensory information from their surroundings, such as a negative reaction to a specific sound**
- **fixated interests or preoccupations**

Individuals are evaluated within each category and the severity of their symptoms is noted.

In order to receive an ASD diagnosis, a person must display all three symptoms in the first category and at least two symptoms in the second category.

# How does autism affect kids?

Children with autism may not reach the same developmental milestones as their peers, or they may demonstrate loss of social or language skills previously developed.

For instance, a 2 year old without autism may show interest in simple games of make-believe. A 4 year old without autism may enjoy engaging in activities with other children. A child with autism may have trouble interacting with others or dislike it altogether.

Children with autism may also engage in repetitive behaviors, have difficulty sleeping, or compulsively eat nonfood items. They may find it hard to thrive without a structured environment or consistent routine.

If your child has autism, you may have to work closely with their teachers to ensure they succeed in the classroom.

Many resources are available to help children with autism as well as their loved ones.

Local support groups can be found through the national nonprofit The Autism Society. The organization Autism Speaks also provides targeted toolkits intended for the parents, siblings, grandparents, and friends of children with autism.

## What causes autism?

The exact cause of ASD is unknown. The most current research demonstrates that there's no single cause. Both genetics and environment may determine whether a person develops autism.

Some of the suspected risk factors for autism include:

- having an immediate family member with autism
- genetic mutations
- fragile X syndrome and other genetic disorders
- being born to older parents
- low birth weight
- metabolic imbalances
- exposure to heavy metals and environmental toxins
- a history of viral infections
- fetal exposure to the medications valproic acid (Depakene) or thalidomide (Thalomid)

## What tests are used to diagnose autism?

An ASD diagnosis involves several different screenings, genetic tests, and evaluations.

## Developmental screenings

The American Academy of Pediatrics (AAP) recommends that all children undergo screening for ASD at the ages of 18 and 24 months. Screening can help with early identification of children who could have ASD. These children may benefit from early diagnosis and intervention.

The **Modified Checklist for Autism in Toddlers (M-CHAT)** is a common screening tool used by many pediatric offices. This 23-question survey is filled out by parents. Pediatricians can then use the responses provided to identify children that may be at risk of having ASD.

## Other screenings and tests

- DNA testing for genetic diseases
- behavioral evaluation
- visual and audio tests to rule out any issues with vision and hearing that aren't related to autism
- occupational therapy screening
- developmental questionnaires, such as the Autism Diagnostic Observation Schedule (ADOS)

Diagnoses are typically made by a team of specialists. This team may include child psychologists, occupational therapists, or speech and language pathologists.

## How is autism treated?

There are no “cures” for autism, but therapies and other treatment considerations can help people feel better or alleviate their symptoms.

Many treatment approaches involve **therapies** such as:

- **behavioral therapy**
- **play therapy**
- **occupational therapy**
- **physical therapy**
- **speech therapy (is the assessment and treatment of communication problems and speech disorders)**

**Massages**, weighted blankets and clothes, and **meditation techniques** may also induce relaxing effects. However, treatment results will vary.

## Alternative treatments

Alternative treatments for managing autism may include:

- high-dose vitamins
- chelation therapy, which involves flushing metals from the body
- hyperbaric oxygen therapy
- melatonin to address sleep issues

Research on alternative treatments is mixed, and some of these treatments can be dangerous.

## Can diet have an impact on autism?

There's no specific diet designed for people with ASD. Nevertheless, some autism advocates are exploring dietary changes as a way to help minimize behavioral issues and increase overall quality of life.

A foundation of the autism diet is the avoidance of artificial additives. These include preservatives, colors, and sweeteners.

An autism diet may instead focus on whole foods, such as:

- fresh fruits and vegetables
- lean poultry
- fish
- unsaturated fats
- lots of water

Some autism advocates also endorse a **gluten-free diet**. The protein gluten is found in wheat, and other grains.

Those advocates believe that gluten creates inflammation and adverse bodily reactions in certain people with ASD. However, scientific research is inconclusive on the relationship between autism, gluten, and another protein known as casein.

## Autism and exercise

Children with autism may find that certain exercises can play a role in alleviating frustrations and promoting overall well-being.

**Any type of exercise that your child enjoys can be beneficial.** Walking and simply having fun on the playground are both ideal.

Swimming and being in water can serve as both exercise and a sensory play activity. Sensory play activities can help people with autism who may have trouble processing signals from their senses.

Sometimes contact sports can be difficult for children with autism. You can instead encourage other forms of challenging yet strengthening exercises. Get started with these tips on arm circles, star jumps, and other autism exercises for kids.