

Autism spectrum disorders (ASDs) are a group of developmental disabilities that can cause significant social, communication and behavioral challenges. People with ASDs handle information in their brain differently than other people.

ASDs are "spectrum disorders." That means ASDs affect each person in different ways, and can range from very mild to severe. People with ASDs share some similar symptoms, such as problems with social interaction. But there are differences in when the symptoms start, how severe they are, and the exact nature of the symptoms.

Autism is defined as an abnormal absorption with the self; marked by communication disorders and short attention span and inability to treat others as people.

There are three different types of ASDs:

Autistic Disorder (also called "classic" autism)

This is what most people think of when hearing the word "autism." People with autistic disorder usually have significant language delays, social and communication challenges, and unusual behaviors and interests. Many people with autistic disorder also have intellectual disability.

Asperger Syndrome

People with Asperger syndrome usually have some milder symptoms of autistic disorder. They might have social challenges and unusual behaviors and interests. However, they typically do not have problems with language or intellectual disability.

Pervasive Developmental Disorder – Not Otherwise Specified (PDD-NOS; also called "atypical autism")

People who meet some of the criteria for autistic disorder or Asperger syndrome, but not all, may be diagnosed with PDD-NOS. People with PDD-NOS usually have fewer and milder symptoms than those with autistic disorder. The symptoms might cause only social and communication challenges.

Causes

Not all causes of ASDs are known. However, therapists learned that there are likely many causes for multiple types of ASDs. There may be many different factors that make a child more likely to have an ASD, including environmental, biologic and genetic factors.

- Most scientists agree that genes are one of the risk factors that can make a person more likely to develop an ASD.
- Children who have a sibling or parent with an ASD are at a higher risk of also having an ASD.
- ASDs tend to occur more often in people who have certain genetic or chromosomal conditions. About 10% of children with ASDs also have been identified as having Down

syndrome, fragile X syndrome, tuberous sclerosis, or other genetic and chromosomal disorders.

- When taken during pregnancy, the prescription drugs valproic acid and thalidomide have been linked with a higher risk of ASDs.
- We know that the once common belief that poor parenting practices cause ASDs is not true.
- There is some evidence that the critical period for developing ASDs occurs before birth. However, concerns about vaccines and infections have led researchers to consider risk factors before and after birth.
- A small percentage of children who are born prematurely or with low birthweight are at greater risk for having ASDs.

ASDs continue to be an important public health concern. Like the many families living with ASDs, CDC wants to find out what causes the disorder. Understanding the risk factors that make a person more likely to develop an ASD will help us learn more about the causes. We are currently working on one of the largest U.S. studies to date, called Study to Explore Early Development (SEED). SEED is looking at many possible risk factors for ASDs, including genetic, environmental, pregnancy, and behavioral factors.

Manifestations

ASDs begin before the age of 3 and last throughout a person's life, although symptoms may improve over time. Some children with an ASD show hints of future problems within the first few months of life. In others, symptoms might not show up until 24 months or later. Some children with an ASD seem to develop normally until around 18 to 24 months of age and then they stop gaining new skills, or they lose the skills they once had.

A person with an ASD might:

- Not respond to their name by 12 months
- Not point at objects to show interest (point at an airplane flying over) by 14 months
- Not play "pretend" games (pretend to "feed" a doll) by 18 months
- Avoid eye contact and want to be alone
- Have trouble understanding other people's feelings or talking about their own feelings
- Have delayed speech and language skills
- Repeat words or phrases over and over (echolalia)
- Give unrelated answers to questions
- Get upset by minor changes
- Have obsessive interests
- Flap their hands, rock their body, or spin in circles
- Have unusual reactions to the way things sound, smell, taste, look, or feel

Treatment

There isn't a cure for ASDs, but children who are affected can be helped to manage their symptoms in a number of different ways. The following have some supporting scientific evidence to justify their use.

Behavioural therapies

Therapies such as Applied Behaviour Analysis (ABA) may help to improve your child's social and communication skills. This involves your child seeing a clinical psychologist or trained

therapist who uses a technique that involves rewarding good behaviour. Your child's psychologist or therapist will also set out a consistent and structured way of dealing with challenging or harmful behaviour.

Other therapies

Other therapies aim to help your child with communication and learning. These include the following.

- A Picture Exchange Communication System (PECS) is where your child is taught to exchange a picture card for something he or she wants. This helps your child to express themselves.
- EarlyBird is a three-month programme that helps you to manage your child and predict inappropriate behaviours at a pre-school age.
- Occupational therapy helps your child adapt to his or her living environment.
- Cognitive behavioural therapy (CBT) can help your child to challenge negative thoughts and behaviour.
- Speech and language therapy helps your child to communicate better.

It's important to remember that one therapy may work for one child but not for another, as all children have different levels of needs and abilities.

Medicines

There are no medications that can cure ASDs or even treat the main symptoms. But there are medications that can help some people with related symptoms. For example, medication might help manage high energy levels, inability to focus, depression, or seizures. Also, the U.S. Food and Drug Administration approved the use of risperidone and aripipazole (antipsychotic drugs) to treat at certain ages children with ASDs who have severe tantrums, aggression, and cause self-injury.

Help and support

Health professionals involved in your child's care can provide help and support for you and your child's carers. For example, respite breaks give you a chance to rest while somebody else looks after your child – these may be provided by social services. Some families are also entitled to benefits such as disability living allowance to help cover the extra expenses involved in caring for a child with an ASD.

School

Children with an ASD often need an educational assessment and special support. Your child may go to a special school or, if possible, attend a mainstream school with extra help.

In general, autistic children do better if classroom activities are very structured. Most schools use the Treatment and Education of Autistic and Communication-Handicapped Children (TEACCH) approach, which provide a very structured learning environment with mostly visual instructions. Parents can work closely with teachers, using the same techniques at home.

Sample Conversation

Therapeutic / Effective Communication to a child with ASD

Mother: Put your shirt on. Now put your hat on.

Child: shirt on...hat on (echolalia)

Mother: Trevor, I said put your shirt on. (pointing to the shirt, mimicking the action)

Now put your hat on. (pointing on the hat, mimicking the action)

Child: ahhhmmm okay, mom.

Mother: You did a good job putting your shirt and hat on, Trevor.

Now, be careful with that glass of milk. That water is VERY hot. (exaggerating tone of voice with the word "VERY" for emphasis)

Child: hum hum, hot...hot...

Mother: Trevor, take a look at that dog outside. What colour is the dog?

Child: White...white...dog is white.

Mother: Way to go, son! You're a smart boy for telling the dog's color correctly.

Let me give you a hug.

Child: Hmmm, hmmm...

Mother: Do you want a sausage?

Child: Nope....no sausage...lolly..I want lolly.

Mother: Here's your lolly. That's right – up here. (encouraging eye contact)