

Autism Spectrum Disorder (ASD)

Definition: People with Autism Spectrum Disorder (ASD) tend to have communication deficits, such as responding inappropriately in conversations, misreading nonverbal interactions, or having difficulty building friendships appropriate to their age. In addition, people with ASD may be overly dependent on routines, highly sensitive to changes in their environment, or intensely focused on inappropriate items. They will have unusual, restricted, or repetitive interests or behaviors. The symptoms of people with ASD will fall on a continuum, with some individuals showing mild symptoms and others having much more severe symptoms. Individuals with Autism Spectrum Disorder will show symptoms in early childhood even if the symptoms are not recognized until later in life.

Symptoms: People with Autism Spectrum Disorder often have problems with social, emotional, and communication skills. Many people with ASD also have different ways of learning, paying attention, or reacting to things.

Children or adults with ASD might:

- not point at objects to show interest (for example, not point at an airplane flying over)
- not look at objects when another person points at them
- have trouble relating to others or not have an interest in other people at all
- avoid eye contact and want to be alone
- have trouble understanding other people's feelings or talking about their own feelings
- prefer not to be held or cuddled, or might cuddle only when they want to
- appear to be unaware when people talk to them, but respond to other sounds
- be very interested in people, but not know how to talk, play, or relate to them
- repeat or echo words or phrases said to them, or repeat words or phrases in place of normal language
- have trouble expressing their needs using typical words or motions
- not play "pretend" games (for example, not pretend to "feed" a doll)
- repeat actions over and over again
- have trouble adapting when a routine changes

- have unusual reactions to the way things smell, taste, look, feel, or sound
- lose skills they once had (for example, stop saying words they were using)

Causes: There is no one cause of autism just as there is no one type of autism. Over the last five years, scientists have identified a number of rare gene changes, or mutations, associated with autism. A small number of these are sufficient to cause autism by themselves. Most cases of autism, however, appear to be caused by a combination of autism risk genes and environmental factors influencing early brain development.

In the presence of a genetic predisposition to autism, a number of environmental stresses appear to further increase a child's risk. The clearest evidence of these autism risk factors involves events before and during birth. They include advanced parental age at time of conception (both mom and dad), maternal illness during pregnancy and certain difficulties during birth, particularly those involving periods of oxygen deprivation to the baby's brain. It is important to keep in mind that these factors, by themselves, do not cause autism. Rather, in combination with genetic risk factors, they appear to modestly increase risk.

Many studies have been conducted to determine if a link exists between immunization and increased prevalence of autism, with particular attention to the measles-mumps-rubella (MMR) vaccine and vaccines containing the preservative thimerosal. These studies have found no link between vaccines and autism. It remains possible that, in rare cases, immunization might trigger the onset of autism symptoms in a child with an underlying medical or genetic condition.

Treatment: Studies have shown that early intervention treatment services in childhood can greatly improve a child's development. Services include helping the child learn how to walk, talk, and interact with others.

The different types of treatments can generally be broken down into the following categories:

- Behavior and Communication Approaches- provide structure, direction, and organization for the child and includes family participation
- Dietary Approaches- based on the idea that ASD symptoms can be caused by food allergies or lack of certain vitamins/minerals
- Medication- can help some people with related symptoms to help manage high energy levels, inability to focus, depression, or seizures. Medication cannot cure ASD.
- Complementary and Alternative Medicine- treatment outside of what would typically be recommended by a pediatrician or other health care professionals.

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