

# Autism spectrum disorders

## What are autism spectrum disorders?

Autism is a complex developmental disability that typically appears during the first three years of life. Autism is a neurological disorder that affects the functioning of the brain, autism impacts the normal development of the brain in the areas of social interaction and communication skills. Children and adults with autism typically have difficulties in verbal and non-verbal communication, social interactions, and leisure or play activities. Autism is the most commonly known type of ASD, but there are others including pervasive developmental disorder-not otherwise specified (PDD-NOS) and Asperger's Syndrome. The symptoms and characteristics of autism can present themselves in a wide variety of combinations from gifted to severe. Although autism is defined by a certain set of behaviors, children and adults can exhibit any combination of the behaviors in any degree of severity.

## What is the cause?

There is no known single cause for autism, but it is generally accepted that abnormalities in brain structure or function play a role. Researchers are investigating a number of theories, including the link between heredity, genetics, medical problems and physiological factors.

## What are some signs?

Every person with autism is a unique individual. Symptoms may range from mild to severe and may change in the same child. People with ASDs may have delays with social, emotional and communication skills. A child with ASD may have difficulty with: "pretend" games, relating to others, eye contact, expressing their needs using typical words or motions, adapting to a change in routine, pointing or showing interest to objects or people, sensory issues. A child with autism may tend to prefer to be alone, repeat or echo words/phrases said to them (echolalia), do things in repetition, have an inappropriate attachment to or obsession with objects, avoid or seek auditory stimulation, process and respond to information in unique ways and may or may not have language. A child with autism may not be responsive to traditional teaching methods.

## Online resources

Siskin Children's Institute • [www.siskin.org](http://www.siskin.org)

Autism Society of America • [www.autism-society.org](http://www.autism-society.org) • 1-800-3-AUTISM

Autism Speaks • [www.autismspeaks.org](http://www.autismspeaks.org)

Kids Quest • [www.cdc.gov/ncbddd/kids/default.htm](http://www.cdc.gov/ncbddd/kids/default.htm)

National Institute of Mental Health • [www.nimh.nih.gov/healthinformation/autismmenu.cfm](http://www.nimh.nih.gov/healthinformation/autismmenu.cfm)

Tennessee Disability Pathfinder • [www.familypathfinder.org](http://www.familypathfinder.org)

TRIAD • [www.TRIADatvanderbilt.com](http://www.TRIADatvanderbilt.com) • 615-936-1705

Talk Autism • [www.talkAutism.com](http://www.talkAutism.com)

# Down syndrome

## What is Down syndrome?

Down syndrome is a common genetic variation that usually causes delay in physical, intellectual and language development. A child with Down syndrome is at higher than normal risk for many medical conditions, most notably congenital heart disease (often corrected by surgery), hearing and vision deficits, leukemia and Alzheimer's disease. There is wide variation in mental abilities, behavior and physical development in individuals with Down syndrome. Each individual has his/her own unique personality, capabilities and talents. Individuals with Down syndrome benefit from loving homes, early intervention, inclusive education, appropriate medical care and positive public attitudes. In adulthood, many people with Down syndrome have jobs, live independently and enjoy recreational opportunities in their communities.

## What is the cause?

Down syndrome is caused by an error in cell division, which results in an extra 21st chromosome. A child with Down syndrome has 47 chromosomes instead of the usual 46. A sperm or egg with an abnormal number (two chromosomes of 21) merges with a normal mate (who has 1 chromosome 21). The exact causes of the chromosomal rearrangement and primary prevention of Down syndrome are currently unknown.

## What are some signs?

There are many clinical signs of Down syndrome, but it is rare to find all or most in one person. Signs may include poor muscle tone (hypotonia), slanting eyes with folds of skin at the inner corners (called epicanthal folds), hyperflexibility (excessive ability to extend the joints), short broad hands with a single crease across the palm on one or both hands, small head size, flat nasal bridge, small mouth and ears, broad feet with short toes, short neck, small oral cavity and/or short, high-pitched cries in infancy. Besides having a distinct physical appearance, children with Down syndrome frequently have specific health-related problems. A lowered resistance to infection makes these children more prone to respiratory problems. Some also may have a condition known as Atlantoaxial Instability, a misalignment of the top two vertebrae of the neck which makes these individuals more prone to injury if they participate in certain activities which overextend or flex the neck. Parents need to have their child examined by a physician to determine this condition, proper diagnosis can help prevent serious injury.

## Online Resources

Siskin Children's Institute • [www.siskin.org](http://www.siskin.org)

Down Syndrome Association of Middle Tennessee • [www.dsamt.org](http://www.dsamt.org) • 615-386-9002

Kids Quest • [www.cdc.gov/ncbddd/kids/default.htm](http://www.cdc.gov/ncbddd/kids/default.htm)

National Association for Down Syndrome • [www.nads.org](http://www.nads.org) • 630-325-9112

National Down Syndrome Congress • [www.ndscenter.org](http://www.ndscenter.org) • 1-800-232-6372

National Down Syndrome Society • [www.ndss.org](http://www.ndss.org) • 1-800-221-4602

Tennessee Disability Pathfinder • [www.familypathfinder.org](http://www.familypathfinder.org)

# Cerebral palsy

## What is cerebral palsy?

Cerebral palsy is a term used to describe a variety of disorders that affect the child's ability to move and balance. Classifications of cerebral palsy are based on type (referring to muscle tone) and the location of the movement problem. All children with cerebral palsy have abnormal muscle tone. The muscle tone may be very high (spastic/hypertonia) or low (floppy/hypotonia) or there may be fluctuating muscle tone (athetosis or ataxia). Cerebral palsy may be classified according to the location of the movement disorder. Diplegia indicates that the legs are primarily affected, hemiplegia indicates that one side of the body is affected and quadriplegia indicates that all extremities are affected.

## What is the cause?

Cerebral palsy is caused by damage to the area of the brain that controls movement, posture and balance. The injury to the brain generally occurs either before, during or after birth. Damage to the brain is commonly a result of bleeding within the brain (usually associated with prematurity), lack of oxygen to the brain, or infection (such as CMV). Cerebral palsy is NOT a progressive disorder. Depending on the extent and location of brain injury, the child with cerebral palsy is at risk for other developmental disabilities such as learning disabilities, mental retardation, vision and hearing deficits, seizures and language disorders. Intervention in cerebral palsy may involve a variety of professionals including therapists, educators and physicians who specialize in treatment of this disorder.

## What are some signs?

Signs of cerebral palsy include delays in achieving motor milestones (particularly sitting and walking), movements which appear very stiff in nature, strong use of one hand/leg during movement and feeding difficulties.

## Online Resources

Siskin Children's Institute • [www.siskin.org](http://www.siskin.org)

American Academy for Cerebral Palsy  
and Developmental Medicine • [www.aacpdm.org](http://www.aacpdm.org) • 847- 698-1635

Centers for Disease Control and Prevention—  
Cerebral Palsy • [www.cdc.gov/ncbddd/dd/ddcp.htm](http://www.cdc.gov/ncbddd/dd/ddcp.htm) • 1-800-CDC-INFO

Cerebral Palsy Foundation • [www.cerebralpalsyinfo.org](http://www.cerebralpalsyinfo.org)

Kids Quest • [www.cdc.gov/ncbddd/kids/default.htm](http://www.cdc.gov/ncbddd/kids/default.htm)

Ontario Federation for Cerebral Palsy • [www.ofcp.on.ca/](http://www.ofcp.on.ca/) • 1-877-244-9686

Tennessee Disability • [www.familypathfinder.org](http://www.familypathfinder.org)

The Cerebral Palsy Network • [www.thecpnetwork.org](http://www.thecpnetwork.org)

United Cerebral Palsy Associations • [www.ucpa.org](http://www.ucpa.org) • 1-800-872-5827