

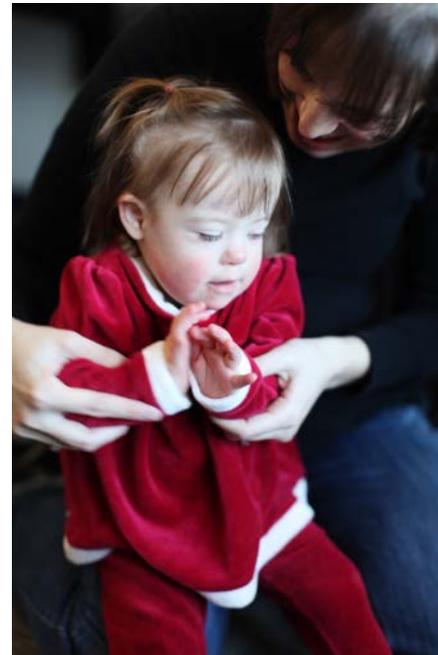
# Down Syndrome

## What is Down syndrome?

Down syndrome is a genetic condition that occurs in one in every 800 to 1,000 births. It affects people of all ages, races and economic levels and is the most frequently occurring chromosomal abnormality. More than 350,000 people have Down syndrome in the United States alone.

Most people with Down syndrome have some degree of mental retardation, usually in the mild to moderate range. Individuals with Down syndrome also have many strengths and talents.

Children with Down syndrome who receive appropriate therapies, education, and medical care can participate in their families and communities just like their peers. They attend school, develop friendships, and work at meaningful jobs. People with Down syndrome make many positive contributions to the community.



## What causes Down syndrome?

The most common form of Down syndrome, Trisomy 21, occurs when there are three (instead of the typical two) number 21 chromosomes in every cell of the body. This extra genetic material causes the characteristics associated with Down syndrome.

## What are the characteristics of Down syndrome?

Not every child with Down syndrome has all the characteristics; some may only have a few, and others may show most of the signs of Down syndrome. Some of the physical features in children with Down syndrome include:

- flattening of the back of the head
- slanting of the eyelids
- small skin folds at the inner corner of the eyes
- flattened nasal bridge
- slightly smaller ears
- small mouth
- decreased muscle tone
- small hands and feet

Children with Down syndrome may have some or all of the following:

- ear infections and hearing loss
- difficulty with speech sound production
- receptive and expressive language impairments
- feeding difficulties
- Older children have a higher rate of stuttering

Children with Down syndrome learn best by seeing and doing and they often have difficulty remembering information that is only presented verbally.

### **What is the treatment for Down syndrome?**

Although there is no medical cure for Down syndrome, children with Down syndrome can make great progress with intervention. Infants with Down syndrome should begin early intervention as soon as possible. They should also have their hearing tested in the newborn period and they should be referred to an ear, nose, and throat (ENT) doctor at the first sign of ear infections. Infants with Down syndrome who are having feeding difficulties should be evaluated by an interdisciplinary feeding team.

Toddlers with Down syndrome should be seen by a speech-language pathologist to begin individual and/or group therapy. All children have their own individual challenges and families and speech-language pathologists need to work together to determine the best intervention for each child. Treatment often includes a “total communication approach” using sign language, pictures, and printed words with spoken language.

Individuals with Down syndrome continue to grow and develop throughout their lifespan. Infants, toddler, children, adolescents, and young adults all benefit from speech-language therapy.

### **What can parents do to help?**

The purpose of speech therapy is to teach children to use clear speech and to promote receptive and expressive language development to the best of each child’s ability. To make the most of what is learned in therapy it is important for families to practice those skills everyday. Parents should try to incorporate skills into daily activities and they may also set aside a few minutes each day to practice new skills.

### **Websites on Down syndrome:**

- Down Syndrome Association of Greater Cincinnati: <http://www.dsagc.com/>
- National Down Syndrome Society: <http://www.ndss.org>
- National Down Syndrome Congress: <http://www.ndscenter.org>

For more information, please contact the Division of Speech Pathology at (513) 636-4341 or visit our website at [www.cincinnatichildrens.org/speech](http://www.cincinnatichildrens.org/speech).