

Developmental Disabilities

What are developmental disabilities?

Developmental disabilities are [birth defects](#) related to a problem with how a body part or body system works. They may also be known as **functional** birth defects. Many of these conditions affect multiple body parts or systems.

What are the different types of developmental disabilities?

Nervous system disabilities

These are birth defects that affect the functioning of the brain, spinal cord, and nervous system, which can impact intelligence and learning. These conditions can also cause problems such as behavioral disorders, speech or language difficulties, convulsions, and movement disorders. Some of the common nervous system disabilities include:

- **Mental retardation** - The term mental retardation describes a certain range of scores on an IQ (intelligence quotient) test. Mental retardation can result from a number of different conditions, including (but not limited to):
 - [Down syndrome](#) - a set of mental and physical characteristics related to having an extra copy of Chromosome 21.
 - [Fragile X syndrome](#) - the most common inherited form of mental retardation caused by a defect in a specific part of the *Fragile X Mental Retardation-1* gene that causes the body to produce low amounts or none of a certain protein. Without the protein, the brain doesn't develop normally.
- **Autism Spectrum Disorders** - a range of problems that can affect a person's communication skills, social skills, and intelligence. Because autism is diagnosed on a spectrum, people with this condition can have mild symptoms or severe symptoms; but they all have a type of autism.

Sensory-related disabilities Sensory-related problems are often a key part of complex birth defect patterns. For instance:

- Children with congenital rubella are likely to be deaf, and to develop cataracts of the eyes.
- Children with Williams syndrome have trouble seeing spatial relationships between objects around them.
- Those with [Fragile X syndrome](#) are often very sensitive to loud noises; they may overreact or have outbursts in reaction to such sounds.

Metabolic Disorders

This group of functional birth defects affects a person's metabolism, which is the way the body builds up, breaks down, and otherwise processes the materials it needs to function. For example, how your body breaks down sugar to create energy is a metabolic process. Two commonly known metabolic disorders include:

- [Phenylketonuria \(PKU\)](#) - a condition in which a problem with a specific enzyme, a protein that speeds up certain chemical reactions, causes mental retardation.
- Hypothyroidism - a hormonal condition that, if left untreated in an infant, can cause mental retardation.

Degenerative Disorders

Some infants born with degenerative disorders appear normal at birth, but then lose abilities or functions due to the in condition. In these cases, the defect is usually not detected until an older age, when the child or person starts to show signs of loss of function. Some degenerative disorders are the result of metabolic disorders.

Degenerative disorders can cause physical, mental, and sensory problems, depending on the specific defect. [Rett syndrome](#) is an example of a degenerative birth defect. This disorder, which usually affects girls, is most often caused by a specific genetic abnormality.

What are the treatments for developmental disabilities?

Many developmental disabilities have no cure, but there are often ways to treat the symptoms. For example:

- Children with Down syndrome can often benefit from speech therapy, occupational therapy, and exercises for gross and fine motor skills. They might also be helped by special education and attention at school. Surgery can also help correct heart defects.
- People with Fragile X syndrome can get help to reduce or eliminate some of the learning, physical,

For More Information

Clinical Trials

- [NICHD Related Clinical Trials](#)
- [All Related Clinical Trials](#)

News Releases

- [Item of Interest: Public Comment on the DRAFT Intellectual and Developmental Disabilities \(IDD\) Branch Report to Council](#)

[All Related News](#)

Publications/Materials

- [El Síndrome de Rett](#)
- [Tengo Falla Ovarica Prematura?](#)

[All Related Publications](#)

Web Sites

- [Association of Universities Centers on Disabilities](#)
- [Birth Defects and Developmental Disabilities - NICHD Women's Health](#)
- [CDC National Center on Birth Defects and Developmental Disabilities](#)

[All Related Web Sites](#)

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social and emotional, speech and language, and sensory problems common in Fragile X. The sooner those with Fragile X get help, the more they can learn and the better their outcomes.

- There are a variety of treatment options to help with the symptoms of autism spectrum disorders. This may include behavioral, occupational, physical, and speech-language therapy. In addition, educational specialists can help guide the child's school experiences.
- Girls with Rett syndrome can be treated for some of the problems associated with the condition. These treatments generally aim to slow the loss of abilities, improve or preserve movement, and encourage communication and social contact. Treatments may include help from physical therapists, occupational therapists, and speech-language therapists. Other options, such as medication or surgery are also effective for treating some of the symptoms of Rett syndrome.
- Treatment for hypothyroidism, or underactive thyroid, includes daily oral hormone treatment.
- The most effective treatment for PKU is a special diet that carefully limits the protein phenylalanine (Phe). People with PKU who are on this diet from birth or shortly thereafter develop normally and usually have no symptoms of PKU.

Where can I get more information on developmental disabilities?

- [Facts about Down syndrome](#)
- [Autism Overview: What We Know](#)
- [Families and Fragile X Syndrome](#)
- [Rett Syndrome](#)