

Cerebral Palsy: The Basics

WHAT IS CEREBRAL PALSY?

Cerebral palsy is a group of disorders caused by either injuries or abnormalities in the brain that can impair movement, learning, hearing, seeing, and thinking. Many of the effects occur while a baby is still in the mother's womb. However, they can continue to occur within the first two years of life while the brain is still developing. Cerebral palsy is usually diagnosed by 3 years of age. About two to three children in 1,000 are affected. Overall, as many as 800,000 children and adults in the United States have cerebral palsy. Co-existing conditions may include seizures, intellectual disabilities, speech problems, oral-motor dysfunction, and eye problems.

WHAT ARE THE SYMPTOMS?

Common symptoms, which may affect just one arm or leg, an arm and leg on the same side, only the legs, all four limbs, or any combination of arms and legs, are:

- Very tight muscles that don't stretch (spasticity)
- Abnormal walking (gait)
- Tight joints that don't open fully
- Muscle weakness or loss of movement in a group of muscles, or paralysis
- Uncontrollable body movements or tremors

WHAT ARE THE RISK FACTORS?

Infants who are born prematurely have a heightened risk of cerebral palsy. The condition may also occur during early infancy as a result of other conditions, including:

- Bleeding in the brain
- Brain infections such as encephalitis, meningitis, or herpes simplex infections
- Head injury
- Infections such as rubella in the mother during pregnancy
- Severe jaundice
- Genetic disorders such as lissencephaly (smooth brain)
- Inherited form of athetoid cerebral palsy with symptoms such as tight muscles and joints, microcephaly (small head), intellectual impairment, and seizures

WHAT TREATMENTS ARE AVAILABLE?

Although no cure currently exists, treatments are available that may improve symptoms. For example, physical and occupational therapy may improve walking and gait, stretch spastic muscles, and prevent deformities. Braces, other orthotic devices, wheelchairs, and rolling walkers may be used to increase mobility. Speech therapy may address swallowing disorders, speech impediments, and other obstacles to communication. Communication aids such as computers with attached voice synthesizers may also be helpful. Medications may help relax muscle spasms and alleviate pain. Surgery may also correct anatomical abnormalities or release tight muscles in some people.

WHAT RESEARCH IS BEING DONE?

The National Institute of Neurological Disorders and Stroke ([ninds.nih.gov](https://www.ninds.nih.gov)) conducts research and clinical trials. Some research is looking at early brain development to learn how bleeding, epileptic seizures, and breathing and circulation problems may lead to cerebral palsy.

For more *Brain & Life* articles on cerebral palsy, go to [BrainLifeMag.org/CerebralPalsy](https://www.brainlifemag.org/cerebralspalsy).

For more resources and support, contact:

- Cerebral Palsy International Research Foundation: [cpirf.org](https://www.cpirf.org); 609-452-1200
- Pedal with Pete Foundation: [pedal-with-pete.org](https://www.pedal-with-pete.org); 614-527-0202
- United Cerebral Palsy: [ucp.org](https://www.ucp.org); 800-872-5827

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