

## The Emergency Room: Cerebral Palsy

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First described medically in the 1860's by William Little, an English surgeon, cerebral palsy is a group of disorders that affect the ability of an individual to control muscle movement and posture. One of the most common congenital disorders, it is the result of faulty development of, or damage to, the motor area of the brain.

Typical symptoms of cerebral palsy include involuntary muscle movements, difficulty with balance or walking, struggling to perform fine motor tasks, unusually weak muscles, and permanently contracted muscles. Some cases may experience a lag in growth and physical development as well as developmental delays in large motor skills. There may also be impairment in vision, hearing, or in the sense of touch. Intellectual development may also be impaired. The degree of impairment is split about equally within the patient population between normal intellectual development, mildly impaired, and moderately or severely impaired development.

There are four main classifications of cerebral palsy:

- Spastic, the most common form, accounts for 70% to 80% of all cases. In this form, the muscles are stiff, weak, and contracted.
- Athetoid affects 10% to 20% of all patients and is characterized by slow, uncontrolled muscle movements. Emotional stress can aggravate the symptoms and cause increased muscle jerking.
- Ataxic, the most rare form of cerebral palsy and affecting 5% to 10% of cases causes poor coordination, balance problems, muscle trembling, and depth perception problems.
- Mixed forms of the preceding three forms is quite common and usually involves spastic and athetoid forms.

According to the United Cerebral Palsy Association, more than half a million people in the United States have cerebral palsy. The disorder occurs during pregnancy, during the birth process, after birth, or before the age of five. More than 4,500 children in the United States are diagnosed each year.

Acquired cerebral palsy stems from brain damage received during the first few months or first few years of life. These cases are typically the result of infections that affect the brain, such as bacterial meningitis or viral encephalitis, or brain trauma experienced in an accident, a fall, or by child abuse.

Congenital cerebral palsy is present at birth but the cause is usually not known. It was originally believed that birth complications caused most cerebral palsy cases. Researchers discovered in the 1980s, however, that this was not the case. Difficulties in birth that result in extended and severe reduction of oxygen to the infant's brain or trauma to the head account for only 10% or fewer of these cases. Some previously unidentified risk factors have been discovered and include exposure to various infections during pregnancy, such as rubella, cytomegalovirus, or toxoplasmosis, which can cause brain injury in the developing child; strokes experienced by the fetus or the newborn as a result of bleeding in the brain; and untreated jaundice caused by Rh incompatibility or a buildup of bilirubin in the blood.

While cerebral palsy cannot be cured, early recognition and treatment is crucial to ensuring longevity, the maximum degree of independence, and a high quality of life. Treatment may include braces to straighten limbs, psychological counseling, surgery, and various therapies including drug, physical, occupational, speech, and behavioral. Ongoing treatment and support will continue for life, although it will change as the patient achieves various life stages. Proper management by a team of specialists can mean that many patients with mild to moderate cerebral palsy can lead near-normal lives when there are no severe intellectual or physical complications. Severe cases, however, may require extensive assistance including help with activities of daily living.

Prognosis for individuals living with cerebral palsy is excellent. The survival rate to adulthood exceeds 90%, although, those who are unable to care for themselves have a substantially shortened life expectancy. Many adults with congenital cerebral palsy are insurable at standard rates for mild and moderate cases showing no significant mental deficiency. Independent, working adults with more severe motor problems may be accepted with table ratings of 50% to 100%. If other medical conditions exist, such as epilepsy, they are treated and rated as an additional impairment. Severe cases will be declined.