

Cerebral Palsy

Cerebral palsy is a term that describes nonprogressive but sometimes changing disorders of movement and posture. These movement problems are due to problems in brain function that occur early in development. Cerebral palsy affects motion, muscle strength, balance, and coordination. These problems are first noted in infancy and continue into adult life. The muscles of speech, swallowing, and breathing may be involved. Intellectual disabilities (mental retardation) and seizures can also occur, but these problems are not always present. The September 1, 2010, issue of *JAMA* includes an article about cerebral palsy. This Patient Page is based on one previously published in the October 4, 2006, issue of *JAMA*.

TYPES OF CEREBRAL PALSY

- **Spastic**—Muscles of the body are stiff and tight and do not allow normal movement.
- **Dyskinetic (athetoid)**—Muscles stiffen when activated to cause abnormal postures of the arms or legs; may also have writhing movements.
- **Ataxic**—Balance and coordination are poor.

RISK FACTORS FOR DEVELOPING CEREBRAL PALSY

- Infection of the mother, including **rubella** (German measles) or cytomegalovirus, during pregnancy
- Premature birth—Premature babies have immature brain tissue that is susceptible to injury from low oxygen or low blood sugar.
- Inadequate oxygen or blood flow to the brain in the mother's womb.
- Rh disease—Mother and fetus have incompatible blood proteins; Rh disease can be prevented by immunization of the mother at appropriate times.
- **Congenital** (birth) defects and **genetic** (inherited) factors
- Head trauma (including shaken baby syndrome)
- Severe **jaundice** (yellowing) in the newborn baby—a buildup of chemicals that may harm an infant's developing brain

DIAGNOSIS OF CEREBRAL PALSY

Babies with cerebral palsy are slow to reach motor developmental milestones. They may not smile, roll over, sit up, crawl, or walk at the expected times. Doctors use physical examination, medical history of the child and the mother, simple tests, and more complex tests to diagnose cerebral palsy.

TREATING CEREBRAL PALSY

Cerebral palsy cannot be cured. However, quality of life can be improved for most children if they receive support and coordinated care, which may involve a variety of experts. Different kinds of therapy (physical therapy, occupational therapy, speech therapy) help children to maximize their potential activities at various stages of development. Coordinated treatment of disorders such as seizures and spasticity are crucial in helping children with cerebral palsy lead a healthier life. Medical research is working toward improving diagnosis, treatment, and prevention of cerebral palsy.



FOR MORE INFORMATION

- National Institute of Neurological Disorders and Stroke
www.ninds.nih.gov
- March of Dimes
www.marchofdimes.com
- United Cerebral Palsy
www.ucp.org

INFORM YOURSELF

To find this and previous JAMA Patient Pages, go to the Patient Page link on JAMA's Web site at www.jama.com. Many are available in English and Spanish. A Patient Page on mental retardation was published in the September 25, 2002, issue; one on chronic diseases of children in the February 17, 2010, issue; one on cytomegalovirus in the April 14, 2010, issue; and one on rubella in the January 23/20, 2002, issue.

Sources: National Library of Medicine at the National Institutes of Health, Centers for Disease Control and Prevention

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