

SPECIAL DEVELOPMENTAL PROBLEMS OF INFANTS AND TODDLERS

Cerebral Palsy

Cerebral palsy is a developmental disability. According to the National Institute of Neurological Disorders and Stroke (NINDS), "cerebral palsy is an umbrella-like term used to describe a group of chronic disorders that appear in the first few years of life and generally do not worsen over time. The disorders are caused by faulty development of or damage to motor areas in the brain that disrupts the brain's ability to control movement and posture". (NINDS web page 9-22-06)

There are multiple possible causes of cerebral palsy, including prenatal and postnatal abuse and neglect. Most often, cerebral palsy is present at birth, and is thought to be the result of some prenatal insult from illness, injury, or presence of toxic substances. Mothers who have no prenatal care, or who abuse alcohol or drugs, increase the risk of cerebral palsy in their infants.

Child welfare workers must be skilled at recognizing the early warning signs of cerebral palsy in populations of abused and neglected infants and children. This can ensure optimum early intervention.

Early symptoms of cerebral palsy are variable. In milder cases, problems may not be apparent until the child reaches school age. Generally, the more severe the condition, the earlier it can be detected.

There are many different conditions that fall within the broad term "cerebral palsy," and there are considerable differences in descriptive terminology in the literature. The types of cerebral palsy can, however, be broadly divided into three major categories.

- ***Spastic*** cerebral palsy is characterized by stiff, chronically tensed muscles combined with muscle weakness.
- ***Athetoid*** cerebral palsy is characterized by slow, writhing, involuntary and uncontrolled muscle movements, with muscle weakness.
- ***Ataxic*** cerebral palsy is characterized by motor incoordination and difficulty with balance and depth perception.

Many persons with cerebral palsy have mixed types. 90% of cerebral palsy is either spastic, athetoid, or a combination of both.

Abnormal Muscle Tone

Infants may exhibit either ***hypotonia***, a significant lack of muscle tone characterized by loose, floppy muscles; or, ***hypertonia***, an excessive degree of muscle tone characterized by tightness, stiffness, and constricted movement. Typical signs of hypertonia related to spastic cerebral palsy might include:

- Keeping one or both hands fisted, or keeping the thumb clenched inside the fist, if the child is over 4-5 months.
- Tightness of the hips, making it difficult to separate the infant's legs to diaper him;
- Keeping the legs in an extended position, or crossing the legs or ankles; kicking the legs in unison, bringing the knees together up to the chest, rather than the more normal alternating leg, bicycle style kicking.
- Evidence of lack of vision, inability to focus or to track moving objects.
- Tongue thrust, moving tongue in and out of the mouth, excessive drooling.

Typical signs of hypotonia or lack of muscle tone may include an inability to maintain head control, and a generalized "floppiness" that will contribute to delayed motor development.

Abnormal Patterns or Delayed Motor Development

Delayed motor development may exhibit itself in numerous ways.

- Failure to achieve head control, or to lift head and chest from a prone position when the child is on his stomach, in a child older than 5 months.
- Failure to reach for objects or to transfer objects from one hand to the other, in a child older than 7 months.
- Collapsing forward when placed in a sitting position, or rounded back when seated, in a child older than 8 months.
- Inability to roll from back to front, in a child older than 6 months.
- Inability to stand, in a child older than 10 months.

Abnormal patterns of motor development refer to developmental milestones that are only partially completed, or to differences in the infant's skill in mastering motor tasks using various parts of the body. For example:

- Persistent use of only one hand when playing with a toy, including reaching across the body to retrieve an object, rather than reaching with the arm that is on the same side of midline as the object. Infants typically use both hands equally for the first 15 months of life.
- Good use of hands and arms, but drags legs. While many infants go through a stage of "G.I. Joe" crawling on their stomachs, failure to progress to more advanced use of the legs might be indicative of cerebral palsy.
- Trembling or inaccurate aim when reaching for an object may indicate athetoid cerebral palsy.
- Walking on tiptoes. Young infants typically stand on their toes when held in a standing position in an adult's lap. By the time the child learns to walk, heels should be flat on the floor. A persistent toe-walking reflex may indicate cerebral palsy.

Treatment Recommendations

Early intervention can increase range of mobility and prevent unnecessary deterioration of motor abilities.

Early intervention can help children learn and grow in spite of their physical problems. (More than 50% of children with cerebral palsy have intellectual potential within the normal range.)

Ongoing physical therapy and proper medical management are necessary.

Developmental assessments should be performed to help determine treatment needs in all developmental areas.

Special infant stimulation programs can greatly improve motor development as well as cognitive and social development.

Vision and hearing should be routinely screened and monitored as the child develops. Cerebral palsy can affect both.

Speech therapy should be provided for children whose motor ability to

speech is involved. For severely involved persons, alternate communication systems (symbolic communication systems, "voice boxes," use of pictures) can increase language development even though speech is absent.

Parents will need considerable support and education. Caring for a child with cerebral palsy can be stressful and difficult. Special services and support for the parent can help them manage.