# Disability Awareness: Cerebral Palsy

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### What is cerebral palsy (CP)?

Cerebral palsy, also referred to as CP, is a term used to describe a group of chronic conditions affecting body movement and muscle coordination. It is caused by damage to one or more specific areas of the brain, usually occurring during fetal development; before, during, or shortly after birth; or during infancy. Thus, these disorders are not caused by problems in the muscles or nerves. Instead, faulty development or damage to motor areas in the brain disrupt the brain's ability to adequately control movement and posture.

"Cerebral" refers to the brain and "palsy" to muscle weakness/poor control. Cerebral palsy itself is not progressive (i.e. brain damage does not get worse); however, secondary conditions, such as muscle spasticity, can develop which may get better over time, get worse, or remain the same. Cerebral palsy is not communicable. *It is not a disease and should not be referred to as such.* Although cerebral palsy is not "curable" in the accepted sense, training and therapy can help improve function.

#### What are the effects?

Cerebral palsy is characterized by an inability to fully control motor function, particularly muscle control and coordination. Depending on which areas of the brain have been damaged, one or more of the following may occur: muscle tightness or spasticity; involuntary movement; disturbance in gait or mobility, difficulty in swallowing and problems with speech. In addition, the following may occur: abnormal sensation and perception; impairment of sight, hearing or speech; seizures; and/or mental retardation. Other problems that may arise are difficulties in feeding, bladder and bowel control, problems with breathing because of postural difficulties, skin disorders because of pressure sores, and learning disabilities.

#### What are the causes?

Cerebral palsy is not a disorder with a single cause, like chicken pox or measles. It is a group of disorders with similar problems in control of movement, but probably with a variety of causes.

Congenital cerebral palsy, results from brain injury during intra-uterine life. It is present at birth,

although it may not be detected for months. It is responsible for about 70% of children who have cerebral palsy. An additional 20 % are diagnosed with congenital cerebral palsy due to a brain injury during the birthing process. In most cases, the cause of congenital cerebral palsy is unknown.

On the other hand, in the United States, about 10 percent of children who have cerebral palsy acquire the disorder after birth. (The figures are higher in underdeveloped countries.) Acquired cerebral palsy results from brain damage in the first few months or years of life and can follow brain infections, such as bacterial meningitis or viral encephalitis, or the results of head injury -most often from a motor vehicle accident, a fall, or child abuse.

A large number of factors, which can injure the developing brain, may produce cerebral palsy. A risk factor is not a cause; it is a variable which, when present, increases the chance of something occurring -- in this case, cerebral palsy. Just because a risk factor is present does not mean cerebral palsy WILL occur; nor does the absence of a risk factor mean that cerebral palsy will NOT occur. If a risk factor is present, it serves to alert parents and physicians to be even more observant to the infant's development.

Risk factors for cerebral palsy include the following: premature birth; low birth weight; inability of the placenta to provide the developing fetus with oxygen and nutrients; lack of growth factors during intra-uterine life; RH or A-B-O blood type incompatibility between mother and infant; infection of the mother with German measles or other viral diseases in early pregnancy; bacterial infection of the mother, fetus or infant that directly or indirectly attack the infant's central nervous system; prolonged loss of oxygen during the birthing process and severe jaundice shortly after birth.

#### Are there different types of cerebral palsy?

Yes. Spastic diplegia, the disorder first described by Dr. Little in the 1860s, is only one of several disorders called cerebral palsy. Today doctors classify cerebral palsy into three principal categories—spastic, athetoid, and ataxic, according to the type of movement disturbance. A fourth category can be a mixture of these types for any individual.

*Spastic cerebral palsy.* In this form of cerebral palsy, which affects 70 to 80 percent of patients, the muscles are stiffly and permanently contracted.

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Doctors will often describe which type of spastic cerebral palsy a patient has based on which limbs are affected, i.e spastic diplegia (both legs) or left hemi-paresis (the left side of the body). The names given to these types combine a Latin description of affected limbs with the term plegia or paresis, meaning paralyzed or weak. In some cases, spastic cerebral palsy follows a period of poor muscle tone (hypotonia) in the young infant.

Athetoid, or dyskinetic cerebral palsy. This form of cerebral palsy is characterized by uncontrolled, slow, writhing movements. These abnormal movements usually affect the hands, feet, arms, or legs and, in some cases, the muscles of the face and tongue, causing grimacing or drooling. The movements often increase during periods of emotional stress and disappear during sleep. Patients may also have problems coordinating the muscle movements needed for speech, a condition known as dysarthria. Athetoid cerebral palsy affects about 10 to 20 percent of patients.

Ataxic cerebral palsy. This rare form affects the sense of balance and depth perception. Affected persons often have poor coordination; walk unsteadily with a wide-based gait, placing their feet unusually far apart; and experience difficulty when attempting quick or precise movements, such as writing or buttoning a shirt. They may also have intention tremor. In this form of tremor, beginning a voluntary movement, such as reaching for a book, causes a trembling that affects the body part being used and that worsens as the individual gets nearer to the desired object. The ataxic form affects an estimated 5 to 10 percent of cerebral palsy patients.

*Mixed forms.* It is not unusual for patients to have symptoms of more than one of the previous three forms. The most common mixed form includes spasticity and athetoid movements but other combinations are also possible.

#### What are the early signs?

Early signs of cerebral palsy usually appear before 18 months of age, and parents are often the first to suspect that their infant is not developing motor skills normally. Infants with cerebral palsy are frequently slow to reach developmental milestones, such as learning to roll over, sit, crawl, smile, or walk. This is sometimes called developmental delay.

Some affected children have abnormal muscle tone. Decreased muscle tone is called hypotonia; the baby may seem flaccid and relaxed, even floppy. Increased muscle tone is called hypertonia, and the baby may seem stiff or rigid. In some cases, the baby has an early period of hypotonia that progresses to hypertonia after the first 2 to 3 months of life. Affected children may also have unusual posture or favor one side of their body.

Parents who are concerned about their baby's development for any reason should contact their physician, who can help distinguish normal variation in development from a developmental disorder.

# Performing Helps Members Of Rock Band 'Flame' Overcome Disabilities

By Michelle Diament, December 1, 2009 http://www.disabilityscoop.com/2009/12/01/flame/6341/

They have Down syndrome, cerebral palsy, intellectual disability, autism and blindness, but it's the rock music that the band Flame is creating that's turning heads around the world.

The band, which is the only touring group of musicians in the world who all have disabilities, began humbly at a talent competition in Gloversville, N.Y. Organizers noticed a collection of uniquely talented musicians who each found solace in music despite their challenges.

Flame began as an experiment, taking their name from the Special Olympics torch. Local performances turned into a full-fledged band complete with a tour bus and appearances around the globe.

Forming the group has been a lifesaver for the members, many of whom had been written off by others in the past. Drummer David LaGrange has intellectual disability and is blind. He grew up in an institution and says Flame is the family he never had.

For lead singer Michelle King, who has autism, being part of the band has helped her become more social and learn independent living skills like cooking and taking public transportation.

In August, Flame performed at the funeral of Special Olympics founder Eunice Kennedy Shriver, where they caught the eye of Oprah Winfrey and other guests. But that's not enough for the group who dream of becoming famous. They want to hear their songs played on the radio everywhere so that people can see what those with disabilities are capable of, reports ABC News. Copyright © 2009 Disability Scoop, LLC. All Rights Reserved.

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