

## **CEREBRAL PALSY CASES**

Do you have a child with cerebral palsy? If you do, you are acutely aware of the immense responsibilities this has placed upon the life of every member of your family. Certainly, you are well educated in many features of the syndrome. If your child suffers from cerebral palsy, please contact EICHEN LEVINSON & CRUTCHLOW LLP. We have a capable aggressive staff including a physician as well as a registered nurse who will review your child's case and determine if it was the result of a medical mistake. Below, you will find an overview of some of the history and medicine of cerebral palsy:

### **History of Cerebral Palsy in Children**

The medical profession did not begin to study cerebral palsy as a distinct medical condition until 1861. In that year, an English orthopedic surgeon, Dr. William John Little, published the first paper describing the neurological problems of children with spastic diplegia. Spastic diplegia is still sometimes called Little's Disease. This was a disorder that struck children in the first years of life, characterized by stiff, spastic muscles in their arms and legs. These children had difficulty grasping objects, crawling, and walking. They did not show signs of improvement with age, nor did they become any worse.

The term cerebral palsy came into use in the late 1800's. Sir William Osler, a British medical doctor, is believed to have coined the term. Dr. Sigmund Freud, the Austrian neurologist better known for his work in psychiatry, published some of the earliest medical papers on cerebral palsy. In the early years, Dr. Little believed most cases of cerebral palsy were caused by obstetrical complications at birth. He suggested that children born with cerebral palsy were born following complicated deliveries, and that their condition was a result of lack of oxygen to the brain. He said this oxygen shortage damaged sensitive brain tissues controlling movement.

Fortunately, in the past few decades, information on the many facets of cerebral palsy has significantly increased. Today, the medical community has great interest in studying cerebral palsy to determine its causes and the most effective ways to treat it. As knowledge and treatment techniques have expanded and improved, so too have the prospects of all children with cerebral palsy.

### **Causes of Cerebral Palsy**

Why does your child have cerebral palsy? The simplest answer to this question is because your child has brain damage. This leads naturally into the second question: Why does your child have brain damage? There are many possible answers to this second question, because there are many reasons children can sustain brain damage. Your doctor must carefully review your child's health history and conduct a variety of medical and neurological tests to help determine the cause. Cerebral palsy is caused by an injury to the brain before, during, or shortly after birth. In many cases, no one knows for sure what caused the brain injury or what may have been done to prevent the injury. A large number of factors which can injure the developing brain may produce cerebral palsy. In general, however, there are two problems that can cause cerebral palsy:

1. Failure of the brain to develop properly (developmental brain malformation)
2. Neurological damage to the child's developing brain

Whatever the cause of your child's cerebral palsy, the severity of the brain damage generally depends on the type and timing of the injury. For example, in very premature babies, bleeding into the brain (intraventricular hemorrhage) can cause extensive damage. Also, the longer an unborn child goes without oxygen, the greater the extent of brain tissue damage.

Ten to fifteen percent of cerebral palsy is caused from a recognized brain injury, such as infection (like meningitis), bleeding into the brain, and damage caused by lack of oxygen. It is very important that you understand that a brain injury caused during delivery in many cases could have been prevented. Medical mistakes are responsible for thousands and thousands of cerebral palsy cases. It would be virtually impossible for a parent, on their own, to determine if a medical mistake caused their child's cerebral palsy or brain damage. It is only through the concerted efforts of a legal/medical team that can answer the question, "was my child's cerebral palsy preventable?"

### **Cerebral Palsy Definition**

What is the Definition of Cerebral Palsy? Cerebral palsy is a term used to describe a group of chronic conditions affecting body movements and muscle coordination. It is caused by damage to one or more specific areas of the brain, usually occurring during fetal development, or during infancy. It can also occur before, during or shortly following birth.

"Cerebral" refers to the brain and "Palsy" to a disorder of movement or posture. If someone has cerebral palsy it means that because of an injury to their brain (cerebral) they are not able to use some of the muscles in their body in the normal way (palsy). Children with cerebral palsy may not be able to walk, talk, eat or play in the same ways as most other children.

Cerebral palsy is neither progressive nor communicable. It is also not "curable" in the accepted sense, although education, therapy and applied technology can help persons with cerebral palsy lead productive lives. It is important to know that cerebral palsy is not a disease or illness. It isn't contagious and it doesn't get worse. Children who have cerebral palsy will have it all their lives.

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 spasm
- involuntary movement
- disturbance in gait and mobility
- abnormal sensation and perception
- impairment of sight, hearing or speech
- seizures

## **Cerebral Palsy Statistics**

Because cerebral palsy influences the way children develop, it is known as a developmental disability. In the United States today, more people have cerebral palsy than any other developmental disability, including Down syndrome, epilepsy, and autism. About two children out of every thousand born in this country have some type of cerebral palsy. Studies have shown that at least 5000 infants and toddlers and 1,200 - 1,500 preschoolers are diagnosed with cerebral palsy each year. In all, approximately 500,000 people in this country have some degree of cerebral palsy. There is not an American system for monitoring cerebral palsy's occurrence. Therefore it is not known whether the incidence of cerebral palsy is increasing, declining, or staying the same. However, studies have shown that the use of the electronic fetal heart rate monitor during labor and delivery has not decreased the rate of cerebral palsy primarily because of the mistakes made by doctors and nurses during the birthing process.

Although children with very mild cerebral palsy occasionally recover by the time they are school-aged, cerebral palsy is usually a lifelong disability. In most cases, the movement and other problems associated with cerebral palsy affect what a child is able to learn and do to varying degrees throughout their life.

## **Cerebral Palsy Diagnosis**

How is the Diagnosis of Cerebral Palsy Made? When an infant or child has brain damage, a variety of symptoms can lead doctors and parents to suspect that something is wrong. In the first few months of life, an infant with brain damage may demonstrate some or all of the following symptoms:

- Lethargy, or lack of alertness
- Irritability or fussiness
- Abnormal, high-pitched cry
- Trembling of the arms and legs
- Poor feeding abilities secondary to problems sucking and swallowing
- Low muscle tone
- Abnormal posture, such as the child favoring one side of their body
- Seizures, staring spells, eye fluttering, body twitching
- Abnormal reflexes.

During the first six months of life, other signs of brain injury may also appear in an infant's muscle tone and posture. These signs include:

Muscle tone may change gradually from low tone to high tone; a baby may go from floppy to very stiff.

The child may hold his or her hand in tight fists.

There may be asymmetries of movement, that is, one side of the body may move more easily and freely than the other side.

The infant may feed poorly, with their tongue pushing food out of their mouth forcefully.

Once a baby with brain damage reaches six months of age, it usually becomes quite apparent that he or she is picking up movement skills slower than normal. Infants with cerebral palsy are more often slow to reach certain developmental milestones, such as rolling over, sitting up, crawling, walking and talking. Parents are more likely to notice these developmental delays and abnormal behaviors, especially if this is not their first child. Sometimes when they express their concerns to their physicians, their child is immediately diagnosed as having cerebral palsy. More often, however, medical professionals hesitate to use the term "cerebral palsy" at first. Instead, they may use broader terms such as:

- Developmental delay, which means that a child is slower than normal to develop movement skills such as rolling over and sitting up
- Neuromotor dysfunction, or delay in the maturation of the nervous system
- Motor disability, indicating a long term movement problem
- Central nervous system dysfunction, which is a general term to indicate the brain's improper functioning
- Static encephalopathy, meaning abnormal brain function that is not getting worse.

So why do doctors frequently delay making a final diagnosis and prognosis when a child may have cerebral palsy? Part of the answer lies in the plasticity of a child's central nervous system, or its ability to recover completely or partially after an injury occurs. The brains of very young children have a much greater capacity to repair themselves than do adult brains. If a brain injury occurs early, the undamaged areas of a child's brain can sometimes take over some of the functions of the damaged areas. Although the child may have some motor impairment, he or she can often make great progress in other motor skills.

Another reason doctors may delay a diagnosis of cerebral palsy is that a child's nervous system organizes over time. Damage to the brain may affect your child's motor abilities differently. For example, tone can go from low to high or vice versa, or involuntary movements can become more obvious. Generally, however, a child's motor symptoms stabilize by two to three years of age. After this age, tone is probably not going to change dramatically.

So what does all of this mean? It means that a cerebral palsy diagnosis is not made overnight. Since the extent of your child's problems will probably not be clear for some time, his or her symptoms need to be monitored by an interdisciplinary team. This is a group of professionals with specialties in different areas. These health care professionals gather information on the child's accomplishments and make comparisons over the months and years of the child's life. They will keep you up to date on your child's current needs and problems, as well as the medical reasons for these problems, if known. When diagnosing cerebral palsy, the interdisciplinary team must first conduct an assessment or evaluation of the child's strengths and needs in all areas. As your child grows older, additional assessments may be necessary.

In conclusion, cerebral palsy is diagnosed by a complete examination of your child's current health status. Doctors will test your child's motor skills and look carefully at his or her medical history. They will also look for slow development, abnormal muscle tone, and unusual posture. When diagnosing cerebral palsy, doctors must rule out other disorders that can cause abnormal movements. Cerebral palsy does not get worse, in other words, it is not progressive. Based on this fact, doctors must make the determination that your child's condition is not progressively getting worse. Doctors will also use a number of different specialized tests in diagnosing cerebral palsy. For example, the doctor may order a CT (computed tomography). This is an imaging of the brain that can determine underdeveloped areas of brain tissue. The doctor may also order an MRI (magnetic resonance imaging). This test also generates a picture of the brain to determine areas that may be damaged. In addition to these imaging tests, intelligence testing is also used. This helps to determine if a child is behind from a mental standpoint. In addition to diagnosing cerebral palsy through a complete and thorough examination of the child's abnormalities and behaviors, a review of the mother's pregnancy, labor and delivery and care received is also conducted.

### **Therapy and Treatment for Cerebral Palsy**

Following your child's interdisciplinary assessment, the professionals providing care for your child will develop recommendations for his or her treatment. Many treatments are available to help a child function at the highest level possible. Although many treatments are available, we will touch upon a few of the most basic approaches used today to help a child achieve their optimal level of functioning.

Since no two children are affected by cerebral palsy in exactly the same way, individual treatment programs vary widely. But because all children with cerebral palsy have movement problems, you can expect that an important component of your child's treatment will be a therapeutic exercise program. Depending on your child's needs, a physical therapist, an occupational therapist, and a speech-language pathologist will work with your child to help him or her improve posture and movement.

At first, your child will likely see his or her therapist quite often, sometimes at least twice a week. As your child grows, he or she may need a less intensive program. The therapists will probably expect you to work on the child's movement skills at home, and will train you in special exercises and handling techniques. Because the time commitment to a therapy program is tremendous, it is wise for both parents, and other caretakers, to be involved. In general, it is considered very early intervention if a baby begins therapy before six months of age. Most infants are not referred until later in the first year or sometime in the second year of life. Of course, the age at which your child is referred will depend to some extent on how quickly the physicians diagnose cerebral palsy, or other problems requiring therapy. Researchers are still studying the long term benefits therapy can offer. But it is generally agreed that children who receive good treatment not only have fewer movement limitations, but also have better postures, better muscle development, and better abilities in toileting, feeding, and dressing themselves. Furthermore, therapy programs enrich children's lives by enabling them to explore and experience activities that they might not otherwise be able to do independently.