

# MARY FREE BED KIDS CEREBRAL PALSY FACT SHEET

Cerebral palsy (CP) is a group of disorders caused by a brain malformation or injury, which occurs before or during birth as well as very early in life. The most common childhood motor disability, CP is more prevalent among children born prematurely or at a low birth weight. Boys are affected more than girls and Black children more than Caucasian kids.

## Symptoms

A chronic condition, CP primarily affects movement, muscle coordination, balance and posture, although there can also be problems with cognition, vision, hearing and speech. One study found 42% of kids with CP also had epilepsy, while 7.5% of the children were diagnosed with autism spectrum disorder.

While symptoms typically don't worsen with age, some may become more apparent. Muscle shortening and rigidity can cause functional deterioration if not aggressively treated. Because babies naturally have erratic movements, it's been historically difficult to detect CP. Often a diagnosis wasn't made until children were two to three years of age.

## Baby Brains

During the first months of life, brains are rapidly developing, producing more than a million neural connections each second. That stops at about two years of age – the very point when CP has traditionally been diagnosed. By intervening when a baby is weeks old, new pathways can be created that lay the groundwork for normalized movement.

## Causes

CP is caused by abnormal development or lack of oxygen to the brain. Impaired blood flow can be from injuries, infections or medical conditions such as a cardiac defect. Many times, stroke is the culprit.



## Early Detective Work

A new technique is radically changing that. General Movement Assessment (GMA) enables doctors to analyze a baby's movement patterns and diagnose potential CP soon after birth. Early detection leads to immediate rehabilitation, which can dramatically reduce the negative impact CP has on children, their families and the lifelong cost of care.



## Animation Technology

Up until recently, a CP diagnosis often meant kids would have two to three surgeries between childhood and adolescence. We're changing that, too, with a sophisticated evaluation called Computerized Movement Assessment (CMA).

- Electrodes are attached to specific muscles.
- Kids walk down a specialized platform that measures foot pressure.
- Simultaneously, high-speed cameras placed around the room take 120 photos per second. It's the technology of Disney and video game animation.
- Computers then create a 3D model of the child's movement pattern and superimpose images of normal gaits.
- Information obtained from this study has made it possible to postpone, reduce and sometimes eliminate surgeries.

## Treatment

After a baby is evaluated and CP is a concern, the treatment team is created. Led by a board-certified pediatric rehabilitation physician and composed of parents, therapists and other clinicians as needed, goals are set, parents are educated and armed with homework assignment, and it's full steam ahead.



## Economic Costs

Cerebral palsy is a costly condition on many levels. Kids have physical strain and sometimes pain. Parents have childcare concerns, sometimes leading them to work opposite ends of the clock or quit their jobs entirely. The family has less income at a time when medical bills are growing. Society supports kids with CP through Medicaid and other governmental plans for their lifetimes.

Most recent statistics reported by the CDC:

Medical costs for children with CP are **10X** higher than that of children without.

The cost of health care for children with both CP and intellectual disability is **26X** higher than that of children without either condition.

The current lifetime costs of care for an individual with CP is estimated at **\$1.56M**.