

Cerebral Palsy

What is Cerebral Palsy?

Cerebral palsy (CP) is a lifelong group of disorders that affect a person's ability to move, maintain balance, and posture. It is caused by abnormal brain development or damage to the developing brain, usually occurring before or shortly after birth. It is most commonly caused by a lack of oxygen just before, during or after birth. It can also be caused by premature birth, exposure to infections and accidents such as near drowning where the brain has been deprived of oxygen.

CP refers to weakness, paralysis or lack of muscle control originating in the brain. It is a disorder of muscle control resulting in weakness, stiffness, awkwardness, slowness, shakiness and difficulty with balance ranging from mild to severe forms. Symptoms range from mild clumsiness to severe physical limitations requiring specialized care.

There are three main types of CP:

1. Spastic Cerebral Palsy (Most Common)

Affects roughly 80% of individuals with CP. It involves stiff, rigid muscles and jerky movements due to increased muscle tone (hypertonia). It is broken down by the parts of the body it impacts:

Spastic Diplegia: Muscle stiffness primarily in the legs, while arms are less affected.

Spastic Hemiplegia / Hemiparesis: Affects only one side of the body, usually with the arm being more impacted than the leg.

Spastic Quadriplegia / Quadriparesis: The most severe form, affecting all four limbs, the trunk, and the face.

2. Dyskinetic Cerebral Palsy

Caused by damage to the basal ganglia, this type involves involuntary, uncontrolled, and writhing movements (chorea) or sudden, twisting spasms (dystonia). These fluctuations in muscle tone can affect the hands, feet, arms, or legs, and can also make speaking or swallowing difficult.

3. Ataxic Cerebral Palsy

Resulting from damage to the cerebellum, this type affects balance, coordination, and depth perception. Individuals often experience shaky, uncoordinated movements, difficulty with fine motor skills (like writing), and an unsteady gait when walking.

4. Mixed Cerebral Palsy

Occurs when an individual shows symptoms of two or more types of CP. The most common combination is spastic and dyskinetic CP.

Key Symptoms and Types

Symptoms vary significantly by individual but generally involve a lack of muscle control and coordination.

Symptoms include:

Motor Delays: Babies may not roll over, sit, crawl, or walk as early as expected.

Muscle Tone: Muscles may be overly stiff (spasticity) or overly loose (floppy).

Associated Issues: Depending on the severity, CP can impact vision, hearing, speech, swallowing, and cognitive function.

Benefits from working with RDA

- **Weakness, paralysis or lack of muscle control.** Muscles are strengthened by increase use involved in riding.
- **Poor Balance.** The three-dimensional rhythmic movement of the horse is similar to the motion of walking, teaching rhythmical patterns to the muscles of the legs and trunk. Placing the client in different positions on the horse works different sets of muscles.
- **Poor Coordination.** Riding a horse requires a great deal of coordination in order to get the desired response from the horse. Repetition of patterned movements required in controlling a horse quickens reflexes and aids in motor planning. Eye and hand coordination is taught in grooming and preparing the horse, among other activities.
- **Easily Fatigues.** Even though riding is exercise, it is perceived as enjoyment, therefore the rider has increased tolerance and motivation to lengthen the period of exercise.
- **High Muscle Tone** The warmth of the horse and the gentle movement of riding relaxes tight muscles and allows for stretching.
- **Concentration.** Programs include educational concepts, learning numbers, colours, shapes, patterns and sequencing. Memory and concentration can be improved through playing games.
- **Social Isolation.** Group lessons provide riders with the opportunity to join in with their peers and develop friendships.
- **Psychological Benefits.** Adaptive equipment helps riders to participate in a sport to the best of their ability. This includes competition opportunities. Learning to control the horse and other skills provides riders with a sense of achievement.