



# Cerebral Palsy-Cognitive Functioning

## Signs/Behaviors of Cognitive Impairment in Children with CP

Difficulty with age-appropriate learning tasks

Delayed language development; difficulty expressing and/or understanding abstract concepts

Difficulty processing information or expressing thoughts quickly

Impaired memory

Difficulty interpreting sensory demands

Aversion to physical interactions

Social ambivalence

Depression or anxiety

## Cognitive Functions:

Attention span Comprehension  
Decision-making

Difficulty processing emotions  
Language skills Learning memory

Problem-solving Speech  
proficiencydislocation

Flexion deformity of the knee

Club foot deformity

## About the Disorder

Cerebral palsy is a general term most widely defined as “a disorder of movement and posture due to a defect or lesion of the immature brain.” The brain damage that causes cerebral palsy is permanent and non-progressive. In other words, organic brain damage can’t be undone, but there are many ways to optimize learning and overall functioning as the child grows. Cerebral palsy results from two types of brain damage.

Sometimes, the brain develops improperly. More frequently, illness or injury impacts brain development which was otherwise developing normally.

30-50% of children with cerebral palsy have some level of cognitive impairment. A person with brain damage may experience difficulty understanding, processing, or communicating information. When this occurs, it may be referred to as cognitive or intellectual impairment. In children with cerebral palsy, the brain injury that resulted in fine and gross motor impairments is likely the cause of cognitive impairment as well. The extent and the nature of the impairment is dependent on where the brain injury occurred and level of severity.

## Educational Considerations

Roughly 25% of individuals with cerebral palsy experience some degree of learning difficulties. Problems might include difficulty with executive functions such as the skills needed to solve problems, plan effectively, make decisions, pursue goals and exercise self-control. Students may have difficulties with task initiation, work completion, time management and self-advocacy.

Learning may also be challenged by deficits in attention, motor planning, organization, sequencing, and language, as well as visual-motor and perceptual-motor skills. These deficits can impact literacy, numeracy and other academic, functional and social/communication skills.

Attention deficit/hyperactivity disorder (AD/HD) affects approximately 20% of people diagnosed with cerebral palsy. Children who have AD/HD are often impulsive, easily distracted, restless and overly talkative; and/or they may be inattentive and have trouble following directions, taking turns and completing tasks such as school work that requires sustained concentration and mental effort



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## Strategies for Teaching and Learning

- Encourage independent decision-making and problem-solving skills
- Emphasize communication and self-advocacy skills
- Adjust assignments to accommodate abilities and interests
- Use assistive technology to aid in student learning and productivity
- Allow extra time to complete tasks; encourage self-checking of work
- Minimize distractions in the classroom environment; provide accommodations to increase sustained attention to tasks
- Break down assignments and help student to prioritize steps, manage time, and complete tasks in an efficient and timely manner
- When providing direct instruction, incorporate modelling and demonstration teaching
- Provide opportunities to build self-esteem and social interaction skills
- Consider stamina issues when determining workload
- Explore potential career paths early for possible employment and/or post- secondary options, with focus on strengths

(Updated 2018)

## Resources

United Cerebral Palsy  
[www.ucp.org](http://www.ucp.org)

National Institute of Neurological Disorders and Stroke  
[www.ninds.nih.gov/](http://www.ninds.nih.gov/)

Gillette Children's Center for Cerebral Palsy  
[www.gillettechildrens.org](http://www.gillettechildrens.org)



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