

CEREBRAL PALSY

Background

Cerebral palsy (CP) is a group of neurological disorders caused by abnormal brain development or injury to a developing brain. CP can affect muscle tone, coordination and posture. CP does not progressively worsen but symptoms can change as the child's body grows and develops. Although a disorder of muscle control, many with CP also have related conditions such as intellectual impairment, behavior and sleep disorders, epilepsy, and problems with vision, speech, and hearing.

CP can be described by the way it affects movement and the part and severity of the body affected. Two common terms used to describe CP effects on muscle tone include hypotonia (low muscle tone) and hypertonia (high muscle tone).

Depending on areas of the brain affected, one or more movement disorders can occur including spasticity (stiff muscles), dyskinesia (uncontrollable movement), and ataxia (poor balance and coordination). Spastic CP is the most common type and describes tightness or stiffness of muscles, exaggerated or jerky movement, contractures, and abnormal gait. Other types include dyskinetic CP, ataxic CP and mixed CP.

Physical and neurological signs and symptoms of CP include problems with movement and coordination, speech, eating, cognition and perception. Children with CP may be prone to respiratory infection related to aspiration of food, liquid and saliva. Hearing and vision problems are also common related to chronic ear infection and eye muscle imbalance. A child with CP is also at risk for inadequate nutrition as they require increased caloric needs related to muscle tone.

Management can include a combination of therapies to support the child's physical needs. A feeding tube may be placed to help meet the child's nutritional needs. Surgery may be recommended to help treat spasticity, lengthen muscles and tendons, and prevent spinal deformity. A medical device like an intrathecal baclofen pump may also be surgically placed to help muscle tone.



Top Takeaways for School Considerations

Cerebral Palsy (CP) is a motor disorder affecting muscle control.

Individuals with CP will have problems with muscle tone, coordination and posture. The severity and impact, ranging from minimal to considerable physical disability, will vary depending on the part of the brain affected.

The brain injury that caused CP is likely the cause of other chronic health conditions including hearing and vision difficulty, cognitive impairment, and seizures.

Children with CP may have cognitive impairment including issues with communication, behavior and attention span.

Motor coordination can affect a child's ability to access their school environment and/or participate in routine activities that involve both gross and fine motor skills.

Students with CP can burn more calories to perform the same task as a student without a physical disability. Some students may require a feeding tube, supplements, or snacks to meet their daily caloric needs.

Discussion Starters for Educational Team

Kennedy Krieger Institute's Specialized Health Needs Interagency Collaboration

The Specialized Health Needs Interagency Collaboration (SHNIC) program is a collaborative partnership between Kennedy Krieger Institute and the Maryland State Department of Education.



Kennedy Krieger Institute

Considerations for the Individualized Healthcare Plan (IHP)

- Nursing diagnosis of impaired physical mobility, potential for injury related to neuromuscular and cognitive deficits, impaired thought process and risk for falls
- Current medication and treatment orders (consider schedule, equipment needs and side effects)
- Respiratory interventions and equipment needs
- Nutrition interventions and equipment needs (consider brand/size of feeding tube, tube replacement, water flushes, fluid intake goal and supplements); note school district policy on tube replacement and consider keeping backup feeding tube kit at school if applicable
- Assessment of implanted medical device (consider location, date of surgical placement, and device specific information)
- Use of specialized equipment, adaptive equipment, and orthotics
- Activity, positioning, transferring (consider precautions and/or restrictions)
- Skin check, pressure relief techniques
- Equipment troubleshooting (consider equipment/device user manual, battery, charger)
- Consider emergency care plan(s) (ECP) and emergency evacuation plan(s) (EEP) as related to medical needs in the school setting, and staff education/training, as appropriate

1. Has the school staff been trained to implement the student-specific emergency plan?
2. Would the student benefit from evaluations or assessments in any of the following areas: physical therapy, occupational therapy, speech and language therapy, assistive technology, adapted physical education, functional behavior, psychology, hearing and vision?
3. Would the student benefit from additional academic support and/or modified education (e.g., copies of notes, extra time, reduced workload, simplified instructions, alternative formats for presentation of material, 504/IEP)?
4. Can strategies be implemented to assist the student with executive function (e.g., plan, prompts, organizers, agendas)?
5. Does the classroom environment support the student's needs and/or equipment (e.g., desk/seating options, maneuverability space, electrical outlets, flash pass for bathroom or nurse)?

Resources

Kennedy Krieger Institute: Phelps Center for Cerebral Palsy
kennedykrieger.org

Cerebral Palsy Foundation
yourcpf.org

CP Alliance: Early School Years Fact Pack, A Guide for School Staff
worldcpday.org/wp-content/uploads/2015/10/early_school_years_fact_pack.pdf



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KennedyKrieger.org/HealthInformation for more information.