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## What is cerebral palsy (CP)?

Cerebral palsy (CP) is a condition that affects muscle tone, movement and coordination.

- Cerebral refers to the brain.
- Palsy refers to muscle weakness.

CP may be used to describe a group of conditions. CP affects about 3 out of every 1,000 live births. The 4 types of CP are:

- **Spastic**, which causes tight, stiff muscles and movement problems
- **Dyskinetic** (also includes athetoid, choreoathetoid and dystonic CP), which causes involuntary (unable to control) muscle movement
- **Ataxic**, which affects balance and coordination
- **Mixed**, which includes a mix of symptoms from the other 3 types of CP

CP:

- Is chronic (does not go away).
- Cannot be spread to others.
- Cannot be cured.

## What causes CP?

CP is caused from a problem in the brain as it is growing. For some children, the exact cause of this problem is not known. For others, it may happen in the womb (before birth), soon after birth or during the first 2 years of life when the brain:

- Does not grow as it should.
- Gets damaged (also known as a brain injury).

Causes of brain injury may include:

- Bleeding in the brain
- Infections in the brain (from a bacteria or virus)
- Not enough blood flow (from stroke or poor oxygen supply)
- Traumatic brain injury (TBI) or sudden harm to the head from an accident or fall
- Certain genetic conditions

CP does not get worse over time. The brain damage associated with CP will not get worse. However, problems with muscles, movement and coordination may get worse over time.

**In case of an urgent concern or emergency, call 911 or go to the nearest emergency department right away.**

# Cerebral palsy (CP), continued

## What are the possible symptoms?

| Problems with: | Your child may have one or more of these:  |
|----------------|--|
| Muscles        | <ul style="list-style-type: none"> <li>• Too much tone or too stiff (hypertonia)</li> <li>• Too little tone or too floppy (hypotonia)</li> <li>• Exaggerated reflexes (hyperreflexia)</li> </ul>   |
| Movement       | <ul style="list-style-type: none"> <li>• Tremors or other involuntary movements</li> <li>• Slow, writhing (or twisting) movements, often in the hands and arms</li> <li>• Problems with:               <ul style="list-style-type: none"> <li>– Pushing up on the arms, crawling or sitting up</li> <li>– Using only one side of the body</li> <li>– Holding head up by 3 to 4 months old</li> </ul> </li> </ul> |
| Coordination   | <ul style="list-style-type: none"> <li>• Drooling</li> <li>• Problems with:               <ul style="list-style-type: none"> <li>– Balance</li> <li>– Walking</li> <li>– Swallowing</li> <li>– Sucking or eating</li> <li>– Speaking</li> <li>– Making small movements, such as picking up a crayon</li> </ul> </li> </ul>   |

## What other health problems could my child have along with CP?

Children with CP could have other health problems, too. This could include:

- Seeing, hearing or speaking problems
- Convulsions or seizures
- Learning problems
- Behavior problems
- Trouble eating or drinking
- Bladder or bowel control problems
- Abnormal bone growth
- Poor growth over time
- Anxiety or ADHD
- Gastrointestinal (GI) problems like constipation
- Drooling
- Breathing fluids or food into the lungs (aspiration)
- Bedwetting
- Contractures of the joints (joints fixed in position)

Talk with your doctor for more details about your child.

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# Cerebral palsy (CP), continued

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## What medical tests could my child have?

First, your child will need a physical exam. During the exam, the doctor will get a birth history of your child. Specialists like developmental pediatricians, child neurologists and pediatric physiatrists may also assess him.

Your child may then have one or more of these tests:

- Magnetic resonance imaging (MRI)
- Computed tomography (CT) scan
- Cranial ultrasound
- Blood tests

## What is the treatment?

Your child may need a mix of treatments to help with his symptoms. Some treatments include:

- Medicines to decrease muscle stiffness
- Physical, occupational or speech therapy (PT, OT or ST)
- Orthotics (splints or braces)
- Evaluation by other specialists in orthopaedics, neurosurgery or ophthalmology
- Surgery

Surgery may help decrease your child's muscle stiffness and improve his functioning. Some treatments include:

- **Muscle or tendon lengthening:** Your child's doctor will lengthen the large muscles or tendons in the back of the leg, hip, or sometimes the muscles of the arm or hand.
- **Selective dorsal rhizotomy (SDR):** Your child's doctor will cut some of the roots of nerves as they leave the spine. This helps stop the nerves from forcing the muscles to be rigid or tight.
- **Intrathecal baclofen:** Your child's doctor will implant a pump and catheter to give a medicine called baclofen to his spine. The medicine can help reduce spasticity.
- **Botulinum toxin (botox) or phenol treatment:** Your child's doctor will inject botox or phenol into the muscles. Botox is a type of protein, and phenol is an anesthetic. These can help decrease muscle tone and loosen large muscle groups.
- **Bone, joint and spine surgery:** Your child's doctor may need to adjust the bones, joints or spine to improve how those parts of the body move or function.

Talk with your doctor about what treatments are best for your child.

# Cerebral palsy (CP), continued

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## Is follow-up care needed?

Yes. Children's works with doctors who are experts in the care of children with CP. All members of our team see patients with CP in their practices.

To schedule a visit in the Cerebral Palsy Clinic, call 404-785-5437. Locations include:

- Center for Advanced Pediatrics
- Hughes Spalding hospital
- Northside Professional Center

In addition, there are other resources in Atlanta that provide services for patients with CP.

Please talk with your child's primary care doctor to help choose the best location to receive follow-up care.

*Some physicians and affiliated healthcare professionals on the Children's Healthcare of Atlanta team are independent providers and are not our employees.*

**This teaching sheet contains general information only. Talk with your child's doctor or a member of your child's healthcare team about specific care of your child.**

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