**Cerebral Palsy**

Cerebral palsy happens when there’s damage to brain areas that control muscle movement, or when those areas don’t develop as they should. It’s a main cause of childhood disability. The symptoms and effects vary widely, and so do the treatments. But medical and technological advances mean that people with this condition are living longer, fuller lives.

**Overview**

**What is cerebral palsy?**

Cerebral palsy (CP) is a neurological condition that can present as issues with muscle tone, [posture](https://my.clevelandclinic.org/health/articles/posture) and/or a [movement disorder](https://my.clevelandclinic.org/health/diseases/24847-movement-disorders). It’s the result of damage to your brain during fetal development or another developmental disability that affects the way your brain develops. The signs and symptoms of CP appear early in childhood and can vary widely from person to person.

The main effect of CP is that it disrupts control of muscle movement (conditions that do this are known as movement disorders). It may also affect nearby brain areas and the abilities they control, but that isn’t always the case. Having CP doesn’t automatically cause someone to have an intellectual disability.

**Types of cerebral palsy**

There are three main types of CP:

* **Spastic**: This type involves muscle tightness and spasms.
* **Dyskinetic**: This type involves issues with muscle control.
* **Mixed**: This type involves features of both the spastic and dyskinetic types.

Experts also organize subtypes of CP by patterns based on what part of your body they mainly affect. Those patterns are:

* **Diplegic**, which affects your arms more than your legs.
* **Quadriplegic**, which affects all your limbs.
* **Hemiplegic**, which affects one side of your body (left or right) more than the other.
* **Monoplegic**, which affects one limb.
* **Paraplegic**, which affects your legs.

**How common is cerebral palsy?**

CP is uncommon overall. Between 5,500 and 13,100 children in the United States are born with it each year. Research indicates that as of 2019, more than 1 million adults in the U.S. are living with cerebral palsy, and experts also expect that number will keep growing.

**Symptoms and Causes**

**What are the symptoms of cerebral palsy?**

Cerebral palsy can have several different signs and symptoms. Some affect movement, while others affect certain body parts, appearance and behavior.

Some examples of nonmovement signs and symptoms include:

* **Head size differences**: These can include an [unusually small head (microcephaly)](https://my.clevelandclinic.org/health/diseases/9843-microcephaly) or an unusually [large head (macrocephaly)](https://my.clevelandclinic.org/health/diseases/22685-macrocephaly).
* **Irritability**: Babies with CP may seem fussy or irritable frequently.
* **Lack of interaction**: Babies and children with CP may not react to people around them.
* [**Hypotonia**](https://my.clevelandclinic.org/health/diseases/22223-hypotonia-in-babies): This means a lack of muscle tone, giving affected body parts a “floppy” appearance (this usually happens early on and later becomes spasticity or dystonia).
* **Delayed development**: Children with CP often have delays in reaching some expected developmental milestones. Many of these involve movement but can involve other abilities, too.

Some examples of movement symptoms related to cerebral palsy include:

* Stiffness in your arms and legs that makes them hard to bend or use ([spasticity](https://my.clevelandclinic.org/health/diseases/14346-spasticity)).
* Uncoordinated movements.
* Movements that look like they’re slow and writhing or twisting.
* Movements that look like you’re flinging or throwing or fidgeting or dancing.
* Spasms or contractions might cause you to hold an uncomfortable or painful pose ([dystonia](https://my.clevelandclinic.org/health/diseases/6006-dystonia)).

**What causes cerebral palsy?**

Cerebral palsy happens because of damage to parts of your brain that control movement. The damage might not affect just this section, which can cause other problems. And these kinds of damage can often have multiple causes or factors contributing to them.

This damage can happen at different times, including before, during and after birth. Damage before birth makes up about 80% of the causes. After birth, it makes up about 10% of causes.

**Causes before and during birth**

Examples of the causes include:

* Preterm (premature) birth.
* Congenital malformations due to disruptions in fetal brain development.
* Infections in the central nervous system (brain or spinal cord).
* Strokes that affect the developing brain.
* Genetic issues affecting fetal development.
* Lack of blood flow or [oxygen](https://my.clevelandclinic.org/health/diseases/6025-cerebral-hypoxia) to the fetal brain.
* [Kernicterus](https://my.clevelandclinic.org/health/diseases/25014-kernicterus) (brain damage from toxic buildup of bilirubin, a chemical made in your liver).
* [Meconium aspiration](https://my.clevelandclinic.org/health/diseases/24620-meconium-aspiration-syndrome).
* Newborn [hypoglycemia](https://my.clevelandclinic.org/health/diseases/11647-hypoglycemia-low-blood-sugar).

**Causes after birth**

Babies can develop CP after birth due to other events. These are often injury-related, but there are other possible causes, too, including:

* Accidental injuries.
* Physical abuse.
* [Asphyxiation](https://my.clevelandclinic.org/health/diseases/24725-asphyxiation).
* Infection, strokes or bleeding in and around their brain.
* [Jaundice](https://my.clevelandclinic.org/health/diseases/22263-jaundice-in-newborns) and kernicterus.

**What are the risk factors for cerebral palsy?**

There are certain circumstances or factors that can contribute to cerebral palsy or make it more likely to happen. They include:

* Premature birth (babies born before 28 weeks of gestation have the highest risk overall).
* [Low birth weight](https://my.clevelandclinic.org/health/diseases/24980-low-birth-weight) (under 3.3 pounds, or 1.5 kilograms).
* Substance use by a pregnant [woman](https://my.clevelandclinic.org/health/articles/sex-recorded-at-birth).
* Conditions affecting the pregnancy, such as preeclampsia.
* Multiple fetuses (twins, triplets, etc.).
* Infections affecting the placenta or amniotic fluid.

**What are the complications of cerebral palsy?**

Cerebral palsy often happens simultaneously with other conditions that affect brain function. These other conditions may happen because of the same damage that caused CP.

Examples of conditions that often happen alongside or because of CP include:

* [Seizures](https://my.clevelandclinic.org/health/diseases/22789-seizure) and [epilepsy](https://my.clevelandclinic.org/health/diseases/17636-epilepsy).
* [Intellectual disability](https://my.clevelandclinic.org/health/diseases/25015-intellectual-disability-id).
* Conditions that affect your ability to communicate.
* Vision and hearing problems.
* Bone and muscle conditions.
* Feeding issues.
* Behavior disorders.

**Diagnosis and Tests**

**How is cerebral palsy diagnosed?**

A healthcare provider can diagnose cerebral palsy using a combination of methods and tools. The earliest signs of CP are usually things most people wouldn’t know to look for. But a trained healthcare provider can often catch these during your baby’s regular checkups with their pediatrician.

A provider may suspect CP before your baby reaches 12 months old, but will often hold off on making the official diagnosis until your baby is between 18 and 24 months old. A provider can diagnose CP using a physical and neurological exam, specialized assessment checklists, and imaging scans and magnetic resonance imaging (MRI). If your baby has other symptoms, they may need other tests, too. Your baby’s provider can tell you what tests they recommend and why these are necessary.

**Management and Treatment**

**How is cerebral palsy treated?**

Cerebral palsy isn’t curable, but the symptoms and effects are treatable. The possible treatments depend on several factors, including how severe it is, the symptoms and how they affect you. Treating CP also usually involves a team approach, with professionals from multiple specialties contributing.

Treatments can include any of the following:

* **Medications**: These can treat seizures, spasticity and many other effects of CP. These depend greatly on the symptoms and effects of CP, so they vary widely. They can also treat other conditions that happen simultaneously, like mental health disorders.
* **Surgeries**: These can help reduce muscle spasms directly or involve implanting medication pumps to deliver medications consistently. Surgery may also correct joint and spine problems and even involve implanting electrical brain stimulators to help modulate brain activity.
* **Physical and occupational therapy**: These can help a person with CP learn how to handle many everyday needs and tasks. It can also help build strength and mobility.
* **Speech therapy**: People with CP may have trouble communicating. Speech therapy can help them when they have issues that affect their ability to talk.
* **Mental health therapy**: People with CP often experience symptoms of depression and anxiety. Seeing a mental health provider, like a therapist or counselor, can help them cope with these conditions.
* **Social work and educational support**: People with CP may need additional support with school or other aspects of their everyday lives. Social workers, education specialists and other experts can offer supportive care and services that can help.

**Prevention**

**Can cerebral palsy be prevented or can I lower my risk?**

CP happens for reasons that are unpredictable and that aren’t generally preventable. Because of that, it’s impossible to prevent it.

While it isn’t preventable, there are ways to reduce the risks of your baby developing CP from certain causes.

* **Magnesium sulfate for babies born prematurely**: Magnesium sulfate can reduce the risk of CP in babies born before 32 weeks gestation. It helps promote brain circulation in newborns, reducing the risk of damage from lack of blood flow and oxygen.
* **Cooling therapy for babies experiencing asphyxia**: Babies not born prematurely can be at risk for CP if they experience asphyxia. Cooling your baby’s body or head by at least 3.6 F (2 C) may prevent damage to your baby’s brain from lack of oxygen.
* **Prescription caffeine for premature babies**: In medication form, caffeine can help stimulate breathing in babies. Research shows this can also reduce the risk of developing CP.
* [**Corticosteroids**](https://my.clevelandclinic.org/health/drugs/4812-corticosteroids) **during premature labor**: Lung development usually isn’t complete in premature babies. Giving corticosteroids during labor can speed up lung development. That may also reduce the risk of developing CP, but more research is necessary to confirm this.

**Outlook / Prognosis**

**How long does cerebral palsy last?**

Cerebral palsy can begin before, during or just after birth. It’s a permanent, lifelong condition.

**What’s the outlook for cerebral palsy?**

The outlook for cerebral palsy can vary widely depending on its severity. When CP is more severe, the outlook is less positive and tends to have a reduced life expectancy. The more severe it is, the greater the reduction.

At the same time, advances in medical care, supportive treatments and technological innovations are changing the landscape for people with CP. That means people with CP, even moderate or severe cases, are living longer. Because of these shifts in life expectancy and the many variables that can contribute to it, your healthcare provider ( and/or your child’s provider) is the best person to tell you about life expectancy and what can affect that estimate.

**Living With**

**How do I take care of myself?**

If you have CP, many factors can affect how you care for yourself. If you have minor or moderate CP, you’re more likely to be able to care for yourself to some extent. If you have moderate to severe CP, you may have limited ability to care for yourself, and it’s more likely that you’ll need lifelong support or care.

CP is a very variable condition, and it looks different from one person to the next. Because of that, your healthcare provider is the best person to tell you what you can do to care for yourself (or a child you care for). Their guidance will be the most relevant to your particular circumstances.

**What questions should I ask my healthcare provider?**

If your child has CP, some questions you might want to ask include:

* How severe is the damage?
* What abilities does it affect?
* Are there any other conditions that are happening along with or because of my child’s CP?
* What kind of treatments can help my child in the near future?
* What kind of supportive services, assistive technology or other interventions might my child need?
* What kind of symptoms should I watch for that indicate serious or dangerous problems?

If you’re an adult with CP, you may want to ask your provider the following:

* What symptoms should I watch for as I age that could indicate an issue?
* What kind of preventive care do I need specific to my CP?
* Are there any new treatments or support interventions that might help improve my life?

**Additional Common Questions**

**Does cerebral palsy always affect intelligence?**

No, cerebral palsy doesn’t always affect intelligence. In fact, about half of all people with CP have no disruptions in their cognitive abilities. That means it doesn’t affect their intelligence at all. Many people with CP have disruptions in how they communicate, but that isn’t the same as an intellectual disability.

**Is cerebral palsy genetic?**

Cerebral palsy may have contributing genetic factors, but that isn’t always the case. Some people with no genetic factors or family history of CP may still develop it from an injury or other event in early infancy.

**Can a person with cerebral palsy walk?**

Some people with CP may be able to walk without help. Others may need to use support items like crutches, a walker or a cane. Others may use assistive devices like a wheelchair. It varies widely. Some people with CP may be able to walk at times, but fatigue or other temporary symptoms might mean they need to switch to using crutches or a wheelchair.

**A note from Cleveland Clinic**

If you have a child diagnosed with cerebral palsy (CP), you may wonder if you’re to blame. CP happens unpredictably, and it’s usually because of a combination of factors. While CP is a serious condition and frequently causes disabilities, advances in modern medicine mean there are new treatments that can help with the symptoms and effects. And advances in assistive technology can help people with CP live longer, fuller lives.

If your child has CP, your child’s pediatrician can help you understand the condition and offer guidance and support. They can also help you find resources that can contribute to your child’s health and well-being. And if you’re an adult with CP, don’t be afraid to talk to your healthcare provider about any challenges you’re experiencing. They may know of new treatments, technologies or services that might help you.

