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Cerebral palsy: what is it?

Cerebral palsy is a condition that can affect a baby’s brain when it is growing in the womb, or shortly after birth. People with cerebral palsy can have a variety of problems with movement and speech, and sometimes with learning difficulties.

The symptoms vary hugely, with some people unable to walk and talk, while others can live independent working lives.

What is cerebral palsy?

Cerebral palsy (CP for short) is a brain condition that can develop while a baby is developing in its mother’s womb or soon after birth. It affects 2 or 3 in every 1000 children and is the most common cause of disability in children.

CP continues into adulthood but, unlike some conditions that affect the brain, the problems in the brain don’t get worse.

People with CP have varying symptoms, and not everyone with the condition has all of them. But everyone with CP has some problems with movement. You might hear your doctor call this 'motor impairment'.

For example, most people with CP have some level of what’s called **spasticity**.

This means that your muscles and tendons feel tight and stiff, as if they are constantly pulling your limbs in close. It might help to think of spasticity as the opposite of plasticity (from the word plastic, meaning stretchy).

Spasticity can cause symptoms ranging from mild to very severe. But everyone with CP needs to do lifelong regular exercises to help keep their muscles as flexible as possible.

Other common problems that affect people with CP include:

- problems with eating and drinking. This happens because of problems with muscles in the face and throat
- trouble speaking
- varying levels of mental disability (although this does not affect everyone with CP)

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- urinary incontinence (being unable to control your bladder), and
- problems moving the limbs in a steady, coordinated way.

There is no one cause of CP. Babies' brains are delicate when they are growing, and many things can make CP more likely. These include:

- multiple births. CP is more common in twins than in single births, and even more common in triplets
- premature birth. Babies born very early are more likely to have CP
- some illnesses and infections in the mother
- problems during birth, including long and difficult births, and if the baby has trouble breathing during delivery
- sepsis in the baby after birth. This is when the baby's immune system over-reacts to an infection and begins to harm the baby instead of protecting it
- jaundice
- head injuries in very young children, and
- if a baby has seizures shortly after birth.

In about one third of children who develop CP, there is no known cause.

Complications of cerebral palsy

People with CP often have other problems as a result of having CP. These are called **complications**. Common complications of CP include epilepsy, poor eyesight, hearing problems, weak bones, and poor growth.

Many of these complications, such as weak bones and epilepsy, can be treated.

What are the symptoms?

Cerebral palsy is usually diagnosed in young children when they start to try to move around. Children with CP might struggle to reach the 'milestones' as soon as other children.

For example, most babies begin to sit up by themselves at about six months old, crawl at about 9 months, and walk at between 12 and 18 months old. By two years old most children talk in short sentences.

Of course, all children are different. And just because your child doesn't do all these things by these times, it doesn't mean that he or she has CP or any other problem.

But if you are concerned about your child's milestones, talk to your doctor.

If your doctor thinks that your child might have CP, he or she might suggest scans, such as an x-ray to check for problems caused by spasticity, or a scan of the brain to see how it is developing.

Doctors often talk about there being four types of CP, depending on which symptoms someone has. These types are:

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- spastic CP, where spasticity (problems caused by severe muscle stiffness) is the main symptom
- dyskinetic CP, where the main symptom is called dyskinesia, which means that you have repeating muscle movements that you can't control
- ataxic CP, where the main symptoms is ataxia, or a lack of balance and coordination, and
- mixed CP, where someone has symptoms of more than one of the three types listed above.

Spastic cerebral palsy

Spasticity is the most common symptom of CP. It can cause various problems in one or more limbs, most commonly:

- stiffness when trying to bend and stretch limbs
- movements that are jerky and sudden, rather than smooth
- sudden stiffness in muscles and limbs, which can be painful.

Over time, the effects of spasticity can lead to other problems as children grow. These include problems with:

- sensation. Some children don't sense things like touch and pain properly the way they see things. For example, some children struggle with depth perception - realising how far away something is
- thinking clearly
- communication
- behaviour
- controlling the bladder and bowels
- acid reflux (heartburn)
- producing too much saliva
- eating, drinking, and swallowing, and
- epilepsy.

Dyskinetic cerebral palsy

People with this type of CP have trouble controlling the movements of their muscles. Their muscles might move in repeated, jerky ways, and their general posture is often twisted.

The physical effects of dyskinetic CP can be severe, but people with this type of CP often don't have problems with mental disability.

Ataxic cerebral palsy

People with ataxic CP have problems with coordination and rhythm. This means that they can have problems such as:

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- poor balance
- problems handling objects
- difficulty talking and communicating
- tremor (shaking)
- a wide gait when walking (walking with the feet far apart). Many people with ataxic CP have problems walking, and some cannot walk at all.
- poor control over eye movements, and
- weak muscles.

What will happen?

The outlook for someone with CP depends on how severe their physical and mental symptoms are to begin with: for example, how well they can move, walk, and communicate.

But ongoing treatment can make a huge difference to how well some people can do these things.

Lifelong treatment should include an ongoing exercise programme to help with strength, flexibility, movement, balance, and bone strength.

Many people with CP need to take calcium and vitamin D supplements to help with bone strength.

A great deal of long-term therapy is also aimed at helping people communicate as well as possible.

Individual needs

Every person with CP has different abilities. So long-term treatment should be tailored to what helps you (or your child) most.

For example: some people with CP can do most things for themselves, while some people need some help, either from special equipment or from other people. And some people with severe symptoms need to use a feeding tube.

You should have regular assessments to see how you're doing. Young children, especially, will be seen very often as they grow and develop.

The problems in the brain that cause CP don't get worse over time. But people's abilities and needs often change. So, for example, the equipment and medication you need, or the exercises that help you, might change from time to time.

Walking is obviously an important aim for many people with CP. But if trying hard to walk leaves you too tired to do much else, you and your doctor might decide that there are more important goals. Many people with CP direct their strength in other areas, and use mobility aids to get around.

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Technology can also be used to help with communication: for example, special computers can allow people with severe physical symptoms to communicate in ways that were impossible in the past.

School, work, and social life

Most children with CP go to mainstream schools. But some have special education needs, and some need full-time helpers in the classroom.

People who have CP without any mental disability can often go through education and into jobs and careers without problems. About 30 in 100 people with CP manage to work, and about the same number can live independently.

But people with more serious physical symptoms or with mental impairment may not be able to work. For these people, it’s often important to find ways to have a social life and avoid isolation. Day programmes and specially arranged transport, for example, help many people in this way.

Long-term outlook

Treatments for CP can make a big difference. But they can’t cure it. CP is a lifelong condition. People with CP don’t tend to live as long as people without the condition. But the difference is not as big as it used to be.

Life expectancy depends partly on how severe someone’s symptoms are. So someone who doesn’t have severe symptoms can have a fairly normal life expectancy.

People with CP seem to be more likely than other people to have common health problems such as heart conditions and COPD (chronic obstructive pulmonary disease, a condition that affects the lungs).

This might be linked to people with CP being less able to exercise. So it’s important to keep up with your physiotherapy and exercise as much as you can.

CP is common. And there are many charities and support groups for people with the condition. For example, in the UK, Scope (scope.org.uk) has been offering practical help, information, and companionship to people with CP for many years.

Your doctor might be able to help you find a support group in your area. Or you can search online.

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