

Cerebral Palsy

This leaflet explains the definition, causes, risk factors, symptoms and other problems that may be seen more commonly in cerebral palsy and the treatment of cerebral palsy. If you have any further questions or concerns, please speak to the staff member in charge of your care.

What is cerebral palsy?

Cerebral palsy (CP) is an umbrella term that describes a group of neuro developmental disorders of movement and posture. CP causes activity restriction or disability attributed to non-progressive disturbances that occurred in the developing brain during the foetal period or infancy.

- The damage is in the part of the brain which controls ability to use muscles and therefore affects a child's movement, posture, muscle tone and co-ordination.
- Cerebral refers to the brain's cerebrum – the part of the brain that regulates motor function.
- Palsy refers to paralysis of voluntary movement in certain parts of the body.
- CP may only cause mild problems in a child, but can cause more significant mobility issues in other children.
- It is estimated that cerebral palsy affects one in every 400 children.
- The brain damage will not get worse but the child's movement may get worse as they grow older so children with cerebral palsy will need regular monitoring.

What causes cerebral palsy?

In some cases it is possible to identify a cause of cerebral palsy but not in all cases. The child's brain may have been damaged as a result of a child being born prematurely, because of a stroke as a result of a blocked blood vessel, complications of labour, infection, lack of oxygen or bleeding in the brain. Sometimes the cause can be an abnormality of the brain, when the brain fails to develop normally within the womb. In a few rare cases CP may be caused by a genetic link.

How do we know someone has cerebral palsy?

Symptoms vary from child to child which can make diagnosis difficult. Some babies are floppy but others may be stiff in their limb movements (spastic) and some may have abnormal and uncoordinated movements (dyskinesia).

Some children may not use one arm or might have a fisted hand or pointed foot. Some babies may have feeding problems or swallowing difficulties. When older, some children may walk on tiptoe or be late in sitting or walking. Some children may have hearing or sight problems, speech and communication difficulties, learning difficulties, behaviour and emotional issues, epilepsy, constipation and vomiting.

Your health visitor and GP will help to identify the symptoms of cerebral palsy early and to arrange assessment and referral to specialists for diagnosis and support.

Cerebral palsy can be divided into three main groups, depending on how it affects the child's body:

- **Spastic cerebral palsy:** when some muscles are tight and other muscles are weak. This means the child's muscle tone is

increased. It can involve one half of the body (called unilateral spastic cerebral palsy or hemiplegia) or both sides of the body (bilateral spastic cerebral palsy).

- Dyskinetic cerebral palsy: when the child has jerky and poorly coordinated movements of their limbs and their muscle tone changes.
- Ataxic cerebral palsy: this is the least common but muscle tone is reduced and the child's balance is poor.

However, some children may have a mixed form.

How is cerebral palsy diagnosed?

Diagnosis can be made by a paediatrician with expertise in neurology and neuro-disability or by a neurologist. A specialist children's doctor will collect information about the child from family and healthcare workers such as a physiotherapist and perform a thorough neurological examination. Symptoms may show from being a baby, but a doctor may not be able to confirm the diagnosis until the end of the first year or the second year. Diagnosis is made by clinical assessment. However, MRI of the brain may help in confirming the diagnosis. Physiotherapists will provide a standardised motor assessment of the child which will help with the diagnosis.

Facts about cerebral palsy's outcome

- For walking ability: The more severe the child's physical and learning difficulties, the more likely it is they will have difficulty with skills such as walking. If a child can sit by two years of age (corrected age, if they were born prematurely) it is more likely that they will be able to walk unaided by age six. If a child cannot sit or roll by two years of age, they are unlikely to be able to walk unaided.

- For speech development: Around one in two children with cerebral palsy has some element of communication difficulty. The more severe the child's physical and learning difficulties, the more likely they are to have difficulties with speech and language. If the child has uncontrolled epilepsy, they may have difficulties with all forms of communication, including speech. A child with bilateral spastic, dyskinetic or ataxic cerebral palsy is more likely to have difficulties with speech and language than a child with unilateral spastic cerebral palsy.
- For vision: Visual impairment occurs in about half of children and young people with cerebral palsy. Children may be at risk of cortical visual impairment, when there is no eye disorder, but the brain has difficulty receiving or interpreting the visual input. This occurs in around one in five children and young people with cerebral palsy and is more common in more severe motor impairment.
- For hearing: Hearing impairment occurs in around one in ten children and young people with cerebral palsy and is worse in children with severe movement difficulties. It is more common in people with dyskinetic or ataxic cerebral palsy than in those with spastic cerebral palsy.
- For learning disabilities: About half of children with cerebral palsy have problems with learning, memory, understanding and use of language especially if they have severe movement difficulties.
- For behavioural difficulties: Around one in every five children and young people with cerebral palsy may have emotional and behavioural difficulties, find it hard to make friends, and have difficulties with attention, concentration and hyperactivity.
- For epilepsy: This occurs in around one in three children with cerebral palsy especially in children with severe movement difficulties.

Treatment

Paediatricians with expertise in the treatment of cerebral palsy and epilepsy can provide advice and support around treatment options. If a child is diagnosed with cerebral palsy, there is no cure but support can be provided for treatment of physical symptoms so the child or young person can achieve maximum potential.

A multidisciplinary team of various professionals would get involved to support the child.

A health visitor or an early support key worker may assist with coordination of care, help with practical advice and support with day-to-day matters and provision of advice on local services. A child or young person with cerebral palsy may need support to access their physical environment (for example home, school, healthcare, workplace, community), so that they can participate fully in all settings.

Physiotherapy has a very important role in treatment. Monitoring of the hips and spine is often required. Physiotherapists aim to maximise a child's independence and function and can help with learning everyday skills such as sitting and standing. It is important to prevent secondary complications such as deformities or contractures of the bones and muscles.

An orthopaedic surgeon may need to get involved if complications develop.

Medicines to reduce the tightness of the muscles may be needed. Controlling spasms may help a child move more freely. Botulinum toxin ("Botox") injections can help target a specific muscle so they become less stiff temporarily. Severe spasticity can be relieved with an implanted drug pump that injects a muscle relaxant and

anti-spasticity medication into the spine, which could help for the general care of the child. Specialised speech and language therapists will be able to help with any speech problems and also with difficulties relating to feeding and swallowing.

An occupational therapist may often be involved with hand – eye coordination, dressing, use of cutlery, hand writing and if a child needs special seating or any other equipment.

Children with hearing or visual impairment can be helped by means of hearing aids or glasses and, if required, with input from the specialist local authority service for the visually or hearing impaired.

Input from a social worker from the disabled children's team from the local authority may be needed to support with short breaks / respite care and transition.

A child psychologist may support children with emotional difficulties and behavioural issues. If mental health issues are also a problem then referral to Child and Adolescent mental health service may be helpful.

Dietetic input may be required to ensure support for an adequate diet and growth.

Support to address a child's additional educational needs in the right environment may be provided via an Education, Health and Care Plan.

Useful sources of information

Cerebral Palsy Organisation: <http://www.cerebralpalsy.org.uk/>

Contact for families with disabled children: <https://contact.org.uk/>

Early year's material (information for parents):

<https://www.ncb.org.uk/>

Scope: <https://www.scope.org.uk/>

Fun 'n' games: <https://research.ncl.ac.uk/hemiplegiaresearch-fungames>

Disability Living Allowance: <https://www.gov.uk/disability-living-allowance-children>

EHCP: <https://www.gov.uk/children-with-special-educational-needs/extra-SEN-help>

The Paediatric Neurodisability Team

Dr Irene Hadjikoumi, Consultant in Paediatric Neurodisability and Epilepsy

Dr Malihe Ghazavi, Consultant in Paediatric Neurodisability and Epilepsy

Sheron King and Vanessa Ballard, Neurodisability Specialist Nurses
Secretary: Josephine Nganga-Whitfield. Tel. 020 8725 3728

Contact us

If you have any questions please contact the Child Development Centre on 020 8725 1896 (Monday to Friday, 9.00am to 5.00pm).

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit www.stgeorges.nhs.uk

Additional services

Patient Advice and Liaison Service (PALS)

PALS can offer you on-the-spot advice and information when you have comments or concerns about our services or the care you have received. You can visit the PALS office between 9.30am and 4.30pm, Monday to Friday in the main corridor between Grosvenor and Lanesborough wings (near the lift foyer).

Tel: 020 8725 2453 **Email:** pals@stgeorges.nhs.uk

NHS Choices

NHS Choices provides online information and guidance on all aspects of health and healthcare, to help you make decisions about your health.

Web: www.nhs.uk

NHS 111

You can call 111 when you need medical help fast but it's not a 999 emergency. NHS 111 is available 24 hours a day, 365 days a year. Calls are free from landlines and mobile phones.

Tel: 111

AccessAble

You can download accessibility guides for all of our services by searching 'St George's Hospital' on the AccessAble website (www.accessable.co.uk). The guides are designed to ensure everyone – including those with accessibility needs – can access our hospital and community sites with confidence.



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