

Cerebral palsy - causes and implications

Cerebral palsy describes a range of disabilities associated with movement and posture. 'Cerebral' refers to the brain and 'palsy' means weakness or lack of muscle control. Although cerebral palsy is a permanent condition, a child with this condition can achieve greater control over movement, as they learn and practise motor skills. Cerebral palsy affects about 7,500 Victorians and more than 20,000 people Australia-wide.

How cerebral palsy affects the body

Cerebral palsy affects people in different ways – some people experience minor motor skill problems, while others may be totally physically dependent.

Cerebral palsy distorts messages from the brain to cause increased muscle tension (called hypertonus) or reduced muscle tension (called hypotonus). Sometimes this tension fluctuates, becoming more or less obvious. Messages from the brain may also be mistimed, sent to the wrong muscle, or not sent at all. This affects the timing, quality and synchronisation of messages, generally resulting in erratic movement of the muscles. Only the message path between the brain and muscles is affected, not the muscles themselves. Cerebral palsy can be categorised into four main areas, according to the parts of the body it affects:

- **Quadriplegia** – all four limbs are affected and the muscles of the face and mouth may also be affected.
- **Diplegia** – all four limbs are affected, but legs more so than arms.
- **Hemiplegia** – one side of the body is affected.
- **Paraplegia** – both legs, but neither of the arms, are affected.

Types of cerebral palsy

There are four main types of cerebral palsy:

- **Spastic cerebral palsy** – this is the most common type of cerebral palsy. Spasticity means stiffness or tightness of muscles, which is most obvious when the person tries to move.
- **Athetoid cerebral palsy** – athetosis means uncontrolled movements, which often lead to erratic movements.
- **Ataxic cerebral palsy** – this is the least common type of cerebral palsy. Ataxia means a lack of balance and coordination. It often presents as unsteady, shaky movements called tremors.
- **Mixed type cerebral palsy** – may involve a combination of types of cerebral palsy.

Other disabilities sometimes occur with cerebral palsy – hearing, sight or speech disorders, epilepsy or an intellectual disability. However, just because a person has cerebral palsy, it does not mean they will have other disabilities.

Causes of cerebral palsy

Cerebral palsy is not a disease, it is a condition. Cerebral palsy is not contagious. It is also not hereditary. It is usually the result of changes in, or injury to, the developing brain before or during birth, or sometimes in early childhood. The precise nature of the injury is not known. It is usually the result of a diminished blood supply and lack of oxygen to areas of the brain, causing damage to brain cells.

This type of brain damage may be caused by illnesses – such as rubella during pregnancy, meningitis in young children, or accidental injury to the brain.

Recent research indicates that extremely premature babies may also be at risk. The incidence of cerebral palsy appears higher in multiple births.

Signs in early childhood

These signs may indicate cerebral palsy:

- Early feeding difficulties
- Delayed development
- Poor muscle control
- Muscle spasms
- Lack of coordination.

Although the damage to the brain will not worsen, the effect on the body can become more obvious with age, and physical deformities can develop. Early intervention and treatment can reduce the severity of the effects of the disability.

Cerebral palsy may affect a person's mobility, their ability to talk, or their outward appearance. However, like most people, someone with cerebral palsy also has abilities and goals in life that are much the same as everybody else's.

Implications of cerebral palsy

Where speech is affected, the person with a disability will understand what is said to them, but may find it difficult to respond. Practical aids – such as communication boards and electronic devices that provide written or spoken words – help to get a message across.

Many people with cerebral palsy are unable to walk or need assistance to walk. Wheelchairs allow mobility – however, people can still be restricted by inaccessibility to trams, buses, shops and services.

Cerebral palsy may also lead to reduced control of facial muscles, which can result in uncontrolled facial expressions or drooling.

Many people with cerebral palsy can and do live independent lives in the community, and most people with cerebral palsy have the potential to participate in the same activities as others – in business, education, recreation, marriage or raising children.

Where to get help

- Your doctor
- Your local community health centre
- Scope Tel. (03) 9843 3000
- Cerebral Palsy Support Network (CPSN) Tel. (03) 9445 7488 or 1300 277 600 (1300 CPSN 00) - for information, support and referral

Things to remember

- Cerebral palsy refers to a range of disabilities relating to movement and posture.
- Cerebral palsy is not a disease and is not hereditary. It is caused by damage to the brain.
- Cerebral palsy may affect a person's mobility, their ability to talk, or their outward appearance.
- People with cerebral palsy have abilities and their goals in life are much the same as everybody else's.

This page has been produced in consultation with, and approved by:

Scope

Content on this website is provided for education and information purposes only. Information about a therapy, service, product or treatment does not imply endorsement and is not intended to replace advice from your doctor or other registered health professional. Content has been prepared for Victorian residents and wider Australian audiences, and was accurate at the time of publication. Readers should note that, over time, currency and completeness of the information may change. All users are urged to always seek advice from a registered health care professional for diagnosis and answers to their medical questions.

For the latest updates and more information, visit www.betterhealth.vic.gov.au

Copyright © 1999/2012 State of Victoria. Reproduced from the Better Health Channel (www.betterhealth.vic.gov.au) at no cost with permission of the Victorian Minister for Health. Unauthorised reproduction and other uses comprised in the copyright are prohibited without permission.