

Fact Sheet

Cerebral Palsy



What is Cerebral Palsy (CP)?

Cerebral palsy is the name given to a variety of conditions where there is a disorder of movement or posture caused by damage to areas of the brain that control the muscles. This may be caused by a developmental abnormality or an injury to the brain in the early stages of brain development. It is a permanent condition and is the most common cause of disability in children.

Causes of Cerebral Palsy

In many cases the cause cannot be identified. It is known that the developing brain may be damaged by exposure to infections during pregnancy or infancy. Other causes include bleeding in the brain, lack of oxygen, low blood sugar levels, severe jaundice or a brain injury shortly after birth. There are also some rare inherited conditions.

Types of Cerebral Palsy

Cerebral Palsy can be classified by the type of movement disorder it causes.

Listed below are some common types:

Spastic Hemiplegia

Mostly affects one side of the body. Usually children walk with a limp and have one affected arm.

Spastic Diplegia

Affects both sides of the body. Mostly affects the legs and usually occurs after premature birth. Children may walk on their toes with or without bent knees. The legs can turn in and cross at the knees (called scissoring). Children are often able to walk small distances, but more severely affected children require a wheelchair. They can also have difficulty with fine motor activities such as handling objects with their hands or writing.

Spastic Quadriplegia

The most severe form of CP. Both arms and legs are affected. Children are less likely to walk or sit without help. They may have problems with speech and feeding, learning, vision and hearing. They may also have epilepsy (prone to fits).

Dyskinetic Cerebral Palsy

Children with dyskinesia have difficulties with movement control – twisting (dystonia) or

jerking (chorea) or writhing (athetosis) movements. Dyskinesia often occurs in conjunction with muscle stiffness (spasticity).

Ataxic Cerebral Palsy

The least common form of CP. Child shows a lack of balance and co-ordination. Stagger when walking and falls over a lot. May have difficulty with talking.

Children with CP may also have mixed patterns of the types mentioned above.

Encouraging Movement

It is important to help your child to move, stand and, if they can, to walk as well as possible. The muscles and joints in the limbs can become stiff and lead to bone deformities. Children's muscles need to be used and stretched in the correct alignment in order to grow properly. These shortened muscles and tendons are called contractures and are one of the most common problems with CP.

Treatments for CP

There is no cure for CP. Active management from an early age will help your child reach their full potential. The combined efforts of relevant doctors, therapists, counsellors and educators is required to help your child achieve their goals. As a parent you should be fully involved in your child's care, and the decisions made about your child's treatment.

Physiotherapy and occupational therapy

Involves the use of stretching, strengthening, casting, splints and bracing, positioning and aiding movement. This is an essential part of the treatment plan of a child with Cerebral Palsy. Appropriate equipment and, where necessary, changes to the home will also be advised on by the Physiotherapist and Occupational Therapist.

Medications

Reduction of muscle spasticity and spasms in the early stages of CP can assist in reducing permanent muscle shortening. Examples of medications are Baclofen (which may be given orally or by Pump into the fluid around the spinal column), Diazepam and Botulinum Toxin Injections).

Fact Sheet

Cerebral Palsy



Botulinum Toxin Injections

Botulinum toxin type A (Dysport® or Botox®) is a medication used to treat children with spastic or dystonic Cerebral Palsy. The botulinum toxin injections work by decreasing the muscle stiffness (spasticity or dystonia), thus allowing easier movements. Botulinum toxin is injected directly into the muscles. It does not cure CP. The results from botulinum toxin treatments are different for each child. Results are related to the severity of the muscle stiffness, extent of contractures, the age of the child and subsequent therapy. Improvements are usually seen 2-4 weeks after treatment and can be maintained up to 4-6 months. Repeated injections are usually required.

Surgery

Surgery is sometimes needed when muscle contractures are severe enough to cause permanent restrictions of movement or bone deformities. There are several types of surgery used to lengthen muscles, realign bones and treat contractures. The aim of surgery is to improve movement and function, to allow easier care of the child and in some cases to prevent painful complications such as dislocated hips.

Remember:

- CP is the most common cause of disability in children.
- Treatment of CP consists of active management from an early age.
- Physiotherapy and occupational therapy is an important part of managing CP.
- Some children benefit from speech therapy, medications and surgery.

For more information on Cerebral Palsy here are some website addresses you may find helpful:

<http://www.acd.org.au> - Association for Children with a Disability

<http://www.acpa-inc.org.au/> - The Australian Cerebral Palsy Association.

<http://www.thespasticcentre.org.au> - The Spastic Centre.

References

Dressler, D. (2000) Botulinum Toxin Therapy Georg Thieme Verlag, Stuttgart.

Graham, H.K. (2001) Botulinum Toxin Type A Management of Spasticity in the Context of Orthopaedic Surgery for Children with Spastic Cerebral Palsy, European Journal of Neurology 8(5) 30-39.

Jacobs, J.M. (2001) Management Options for the Child with Spastic Cerebral Palsy Orthopaedic Nursing 20(3), 53-61.

Aiona, M.D. & Sussman, M.D. (2004) Treatment of Spastic Diplegia in Patients with Cerebral Palsy Journal of Pediatric Orthopaedics 13(2), S1-S12.

Aiona, M.D. & Sussman, M.D. (2004) Treatment of Spastic Diplegia in Patients with Cerebral Palsy: Part II Journal of Pediatric Orthopaedics 13(3), S13-S38.

Becher, J.G. (2002) Pediatric Rehabilitation in Children with Cerebral Palsy: General Management, Classification of Motor Disorders Journal of Prosthetics and Orthotics 14(4), 144-149.

This fact sheet is for education purposes only.
Please consult with your doctor or other health professional to make sure this information is right for your child.

This document was reviewed on 5th May 2009.

the
children's
hospital at Westmead

www.chw.edu.au

 **SYDNEY
CHILDREN'S
HOSPITAL**
RANDWICK

www.sch.edu.au


Kaleidoscope
HUNTER CHILDREN'S HEALTH NETWORK

www.kaleidoscope.org.au