



WHAT IS HEMIPLEGIA?

This leaflet aims to provide an overview of hemiplegia, the impacts it may have on a child and the support available from HemiHelp, part of the Contact family.

WHAT CAUSES HEMIPLEGIA?

Childhood hemiplegia (sometimes called hemiparesis) is a condition caused by damage to the parts of the brain or spinal cord (the central nervous system) that control movements of the limbs, trunk, face, and so on. It affects one side of the body – the name comes from the Greek words *hemi*, which means half, and *pleges*, which means stricken. Because the nerves coming down from the brain to control the movement of the body cross sides, an injury to the left side of the brain will cause a right hemiplegia and an injury to the right side will cause a left hemiplegia.

Hemiplegia is a relatively common condition, affecting up to one child in 1,000. About 80% of cases are congenital, and 20% acquired.

CONGENITAL HEMIPLEGIA

This is the name given to hemiplegia which occurs before, during, or soon after birth. It is also known as unilateral cerebral palsy. Cerebral palsy is a wider descriptive name for a group of conditions in which movement and posture are affected owing to injury to the brain. These conditions are lifelong and non-progressive, which means they do not get worse. But they may look different over time, partly because a child is growing and developing.

What causes congenital hemiplegia?

The causes of congenital hemiplegia are mostly unknown, and usually parents only become aware of their child's hemiplegia during infancy or early childhood, as a child's difficulty with movement on one side gradually becomes obvious. There is a higher risk in very premature babies and with multiple pregnancies, and it is unclear whether a difficult birth may be an occasional factor. But in most cases the injury occurs at some point during pregnancy, and researchers have not yet been able to isolate any contributory factors. However, some studies suggest



that there could be an increased risk in communities where marriage between close relatives is common. Parents often worry that they may somehow be to blame, but congenital hemiplegia appears to be mostly a matter of chance.

ACQUIRED HEMIPLEGIA

This is the name given to hemiplegia which occurs later in childhood (or adulthood) as a result of injury or illness.

What causes acquired hemiplegia?

Acquired hemiplegia results from damage to the brain during childhood. The most common cause is a stroke (when a bleed or blood clot damages part of the brain), but it can also result from a head injury or infection. Your health professional will talk you through any underlying cause.

“Understanding hemiplegia and knowing how you can help your child achieve his or her potential is vital.”

Parent carer

UNDERSTANDING MEDICAL TERMS

When health professionals talk about hemiplegia, they will comment on:

- *the side of the body affected – a right or left hemiplegia*
- *the type of movement disorder predominantly seen – tightness/weakness or variable control: hyper (high) / hypo (low) / dys (fluctuating) tonia (muscle tone)*
- *any underlying cause.*

WHAT ARE THE EFFECTS OF HEMIPLEGIA?

It is difficult to generalise about the effects of hemiplegia because it affects each child differently.

The most obvious effect is the type of movement disorder that is visible. There may be a varying degree of weakness, stiffness (spasticity) and lack of fluid control (dystonia/dyskinesia) on the affected side of the body, rather like the effects of a stroke. In one child this may be very evident: he or she may have little use of one hand, may limp or have poor balance. In another child it will be so slight that it only shows when attempting specific physical activities.

WHAT CAN BE DONE TO HELP?

Hemiplegia cannot be cured, but a lot can be done to minimise its effects and help children achieve their potential. Your child, once diagnosed, will probably be referred to a Child Development Centre (CDC) or the children's department of your local or regional hospital.

A paediatrician and therapists will work in partnership with you to develop your child's abilities as part of a wider network of professionals. This may include:

- *paediatric neurology – specialists in conditions relating to the nervous system including the brain*
- *orthopaedics – relating to conditions of the bones, joints, ligaments and muscles, and*
- *neurosurgery.*

The developing brain

The developing brain is very flexible, and some of the functions of the damaged area can be taken over by undamaged parts of the brain in a process known as neuroplasticity. Neuroplasticity means that with help from professionals, the brain may be able to 're-wire'.

In children and young people with hemiplegia, the area of the brain affected does not necessarily predict which side of the body will be affected and which functions will be problematic.

Therapy your child may be offered

Your child's management will probably be based on a multidisciplinary approach, involving physiotherapy, occupational therapy, and possibly speech therapy where required.

A physiotherapist and often an occupational therapist will work closely with each other and with parents and carers, to agree a programme of management with specific goals that are tailored to the child's development and needs.

The aim will be to improve the child's participation in everyday activities, for example play, feeding, dressing, school life.

The therapists will work to develop the child's skills, assessing posture and providing muscle stretching, and possibly strengthening activities. This will help prevent possible secondary consequences of hemiplegia such as pain or the development of abnormal shortening of the muscles (contractures).

Involving parents and children in therapy

Goals could include improving function so that the child can grasp an object with the affected hand, or walk more confidently. They should take into account the child and parents/carers' views, the time and effort involved in carrying out therapy activities, the impact on the child and his/her family and how effective the activities might be.

A therapy programme will probably include training parents/carers, and later the child him/herself, to carry out exercises or techniques which they should continue to use at home, for example during dressing or bathing, so that they become part of the child's everyday life. The child's progress should be reviewed regularly to assess how well the therapy programme is working and consider whether there is a need for other treatments as well. These might include:

- *orthoses (devices, such as splints, fitted to the body to improve posture and/or function)*
- *drugs such as baclofen*
- *Botulinum Toxin injections, or*
- *orthopaedic surgery.*

 For more information see our guides to [Ankle/foot orthoses](#) and [Botulinum toxin and hemiplegia](#)

DAY TO DAY LIFE

In general you should treat a child with hemiplegia as normally as possible. It is essential to involve the affected side in play and everyday activities, to make your child as two-sided as he or she can be. As they get older, many children and young people with hemiplegia can be encouraged to develop more use of their affected side through involvement in their chosen sports and hobbies.

ARE THERE OTHER ISSUES ASSOCIATED WITH HEMIPLEGIA?

Yes, there may be. Hemiplegia is caused by injury to the brain, so it is not just motor pathways and motor development that may be affected.

Despite the developing brain's effort to relocate functions to undamaged areas, approximately half of children do have additional diagnoses or co-morbidities.

Some of these are medical in nature, such as epilepsy, visual impairment or speech difficulties. Others are developmental and functional such as slower continence.

Many children have less obvious additional challenges, such as perceptual problems, specific learning difficulties or emotional and behavioural problems.

Each child should be fully assessed and regularly monitored to identify if any of these associated problems are present.

As a child grows these difficulties may become more frustrating and disabling than the more obvious physical ones, but with multidisciplinary management their effects can be reduced.

WHAT DOES THE FUTURE HOLD?

It can be a huge shock to get a diagnosis of hemiplegia. When a child is first diagnosed, it is often difficult for a doctor to predict whether problems will be mild or severe later in life. He or she will often adopt a 'wait and see' approach, which parents may find difficult to accept, since they may feel they are not being given all the facts.

Understanding hemiplegia and knowing how you can help your child achieve his or her potential is vital.

Dealing with professionals

Make good use of the specialists dealing with your child's hemiplegia. Ask them questions and make sure you understand their replies: if necessary ask them to repeat them using non-specialist terms, or to write them down so you can take time to understand them.

Parents have told us that it also helps to make a list of questions to ask before they go to appointments. It can also be helpful to have a friend or relative come along to appointments, as they can help make sure you ask all the questions on your list and take notes for you.

SUPPORT

Life can be difficult for children and young people with hemiplegia who want to do the same things as other children.

They tire more easily and the effort involved in simple tasks can be considerable. They need all the help and encouragement you can give them.

And you need support in your turn – ideally from other parents and carers who understand how you feel and with whom you can also share ideas and information.

 Last reviewed September 2020 Dr Charlie Fairhurst, Consultant in paediatric neurodisability.

 For more information see our website info on [associated issues](#).



HOW HEMIHELP CAN HELP

HemiHelp offers vital support, advice and information to families living with hemiplegia. Our services include a closed, moderated Facebook group, information resources, and events such as workshops and Meet Up and Try It Days. HemiHelp is part of the Contact family.

contact.org.uk/hemiplegia

HOW CONTACT CAN HELP

We can support you with any issue about raising your disabled child: help in the early years, diagnosis, benefits, education and local support. Please visit our website. You can also contact us on our Live Chat service.

 contact.org.uk

If you can't find what you're looking for on our website, give our helpline a call:

 **0808 808 3555**

 helpline@contact.org.uk

Guides for parents

We have a range of free guides for parents. A full list of our guides is at the link below. All our guides are free to parents who call our helpline, and are free to download.

 contact.org.uk/publicationslist

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