

Speech, language and communication difficulties after acquired brain injury

Meningitis and septicaemia can be a cause of acquired brain injury (ABI). This is an injury to the brain that has happened after birth.

This fact sheet explains how speech, language and communication difficulties arise after brain injury and what can be done to help.

Several areas of the brain have developed to help us to understand and use language as a form of communication in both speech and writing. Speech is part of a child's normal development and the left side of the brain is usually responsible for this. Reading and writing have to be taught as they do not develop naturally like speech.

Communication difficulties are common following ABI. Some children may experience temporary and short term changes, but for others the difficulties will be longer lasting or permanent. Most children will retain the ability to speak at the level they were at before the injury, but the continued development and maturity of this skill may be affected, meaning that a child's vocabulary and use of language may be impaired. The ability to acquire new learning can also be affected by ABI, making it harder for a child to improve their reading and writing skills after the injury.

Children who continue to have communication difficulties are likely to need help from a Speech and Language Therapist (SLT). SLTs may also help children who have difficulties with eating, drinking or swallowing. They work in health centres, schools and hospitals, and will try to see children in the most appropriate setting, which may be at home or at school.

If you think your child needs a SLT and this was not arranged before discharge from hospital or during follow up, you can ask your GP, child's teacher, health visitor or nursery teacher to refer you. You can also refer your child directly by contacting your local speech and language therapy service.

The Royal College of Speech and Language Therapists (RCSLT) is the professional body for speech and language therapists in the UK; providing leadership and setting professional standards.

<https://www.rcslt.org/speech-and-language-therapy/>

I CAN is a children's communication charity whose mission is to ensure that no child who struggles to communicate is left out or left behind.

<http://www.ican.org.uk/>

Talking Point is a website created by I CAN, and has extensive information about children's speech, language and communication.

<https://ican.org.uk/i-cans-talking-point/parents/>

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Language

Language skills are closely related to other skills, such as memory and attention, which can also be affected by ABI. The ability of a child to speak and hold a conversation may sometimes hide the fact that there are other underlying difficulties with language and communication. Many children will experience more than one form of communication difficulty after ABI, depending on the areas of the brain affected and the severity of the illness. It is also important to remember that these may occur alongside other changes in physical and cognitive ability, as well as emotional and behavioural difficulties.

Receptive language is the ability to understand information. It involves understanding the words, sentences and meaning of what others say or what is read.

Expressive language is the ability to put thoughts into words and sentences, in a way that makes sense and is grammatically accurate.

Aphasia is an impairment of language, affecting the understanding or production of speech and the ability to read or write. Different types of aphasia correspond to injury in different areas of the brain. The two main types of aphasia are receptive and expressive, but it is usual for children to experience a combination of these following ABI. A SLT will assess a child's pattern of aphasia so that an individual plan of therapy, advice and strategies can be developed to use at home or school.

Receptive aphasia is impairment in the understanding of language. Children with receptive aphasia experience difficulty understanding things they hear or read. They may also have difficulty interpreting gestures, drawings, numbers and pictures.

Expressive aphasia is impairment in the use of language. Children with expressive aphasia experience difficulty communicating their thoughts, ideas and messages to others. It may affect the ability to speak, write, draw or use gestures.

Children with aphasia may not be aware of the errors they are making and can find it difficult to appreciate why others can't understand them. This can lead to frustration and have an impact on their emotional well-being.

It is important to be aware that reading and writing difficulties may also be due to other factors, such as altered vision or co-ordination, which make it difficult to hold or control a pen. Advice and support needs to be specific to the individual, and provided by the relevant specialist, e.g. an Orthoptist or Occupational Therapist. Common strategies include enlarging print size, selecting a clear font, using a line guide to support looking at the full line of print, and increasing contrast between paper and print, e.g. black type on yellow paper.

Speech

ABI can cause communication difficulties by affecting the physical ability to speak, rather than the ability to understand and/or express language.

Dysarthria occurs when there is damage to the areas of the brain that control the muscles used for speech. This reduces the control and clarity of speech and leads to changes ranging from mild slurring of words to a total inability to speak. Aphasia and dysarthria often occur together.

Dyspraxias a difficulty with planned and co-ordinated movements. Dyspraxia of speech causes difficulty with saying what is actually being thought. Children may sometimes be able to speak without thinking e.g. they may give an accurate verbal response to a direct question, but if a sentence has to be planned and thought out, then there may be difficulty.

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A SLT will identify and assess the level of dysarthria and dyspraxia so that an individual plan for therapy and support can be made.

For children who are unable to regain recognisable speech, there are aids that can help them to communicate. This is called AAC (Alternative and Augmentative Communication) and ranges from communication books or boards to equipment that produces speech or written output. With electronic communication aids the child can use picture symbols, letters, and/or words and phrases to construct messages.

Cognitive communication difficulties

The ability to communicate is a complex process that involves many aspects of thinking and social skills, as well as the ability to understand and use language and speech.

Physical and mental (cognitive) fatigue are common following ABI and a child may experience both types, but not necessarily at the same time. Cognitive fatigue can make it difficult for a child to concentrate or think clearly and therefore affect their ability to communicate. Fatigue can also make other communication difficulties, such as dysarthria or aphasia, worse.

If the following functions are affected by ABI, this can also have an impact on a child's ability to communicate effectively:

Attention and concentration

If a child has difficulty concentrating or paying attention when others are speaking, their ability to respond appropriately may be impaired.

Memory

Memory difficulties can affect a child's ability to recall words or remember names.

Executive function

Executive function is a term that refers to a wide range of skills needed to control and monitor all aspects of intentional behaviour. Altered problem-solving ability can result in a child being unable to use or understand language to think through and solve a problem.

A child may also experience difficulty understanding jokes or sarcasm because ABI can cause them to become "concrete" thinkers who are only able to use and understand factual language

Reduced insight may mean that a child is unable to recognise the communication difficulties they have. They may believe they are acting 'normally' which can be very difficult for other people who are trying to communicate and interact with them.

The three topics above are covered in more detail in a separate factsheet 'Learning and cognitive effects of acquired brain injury'.

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The following skills can also be affected by ABI and cause communication difficulties:

Information processing

A child may need much more time to think through what has been said and plan how to respond because their ability to process information has been affected. This can have a significant impact both in school and social situations.

Social communication

Social communication difficulties can mean that a child does not recognise everyday social cues, both verbal and non-verbal, and lead to difficulties with:

- Interacting with peers; particularly teenagers where the conversation is often fast and contains jargon or abbreviations
- Non-verbal communication; particularly in responding to body language or facial expressions
- Understanding the “rules” of conversation such as taking turns in speaking and listening to others before making a comment
- Using socially inappropriate or provocative language.

Further information

<https://www.thechildrenstrust.org.uk/brain-injury-information/info-and-advice/parents-and-carers/talking-to-children-with-acquired-brain-injury>

Sources of information

<https://www.thechildrenstrust.org.uk/brain-injury-information>

<https://www.headway.org.uk/about-brain-injury/individuals/effects-of-brain-injury/communication-problems/>

Walker S & Wicks B, 2005, Educating children with acquired brain injury, David Fulton Publishers, Abingdon, UK