

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 problems arise after brain injury and what can be done to help. In the first few weeks of recovery after meningitis or septicaemia, toddlers who were speaking fluently before their illness quite often go back to baby talk. Communication difficulties may be temporary problems that get better quickly or they may be signs of ABI.

Children who continue to have communication difficulties are likely to need help from a Speech and Language Therapist. Speech and Language Therapists may also help children who have problems with eating, drinking or swallowing. They work in clinics, 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 Speech and Language Therapist and this was not provided 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.

Many 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 problems are common following an acquired brain injury (ABI). 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; this can make it harder for a child to improve their reading and writing skills after the injury.

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

After meningitis or septicaemia, the ability to communicate can be affected in the following ways:



Language impairment

Aphasia is an impairment of language, affecting the production or understanding 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 Speech and Language Therapist will assess a child's pattern of aphasia so that an individual plan of therapy, advice and strategies to use at home or school can be developed.

Receptive aphasia is impairment in the understanding of language. Children with receptive aphasia may show some or all of the following characteristics:

- The ability to speak fluently, but with words in the wrong order.
- A greater ability in one area of language e.g. written words may be recognised better than spoken words.
- The use of non-verbal skills, such as gestures or pictures, to aid communication with others.
- The use of wrong or "made up" words when speaking, making it difficult for others to understand.
- The ability to read may also be affected as children can find it difficult to recognise written letters or words, or understand simple sentences.

Children with receptive 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.

Expressive aphasia is impairment in the use of language. Children with expressive aphasia may show some or all of the following characteristics:

- A lack of fluency when speaking, with a limited vocabulary in short, simple sentences
- The ability to understand language, but not to use it. These may be aware that they have this problem, causing them frustration and distress.
- Difficulty naming objects and people, and not always being able to use cues or prompts to help
- Difficulty writing specific letters or writing words with letters in the wrong order.

It is important to be aware that reading and writing problems may also be due to other difficulties, such as altered vision or co-ordination problems which make it difficult to hold or control a pen. Advice 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 difficulties

ABI can cause communication problems 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 problems ranging from mild slurring of words to a total inability to speak. Aphasia and dysarthria often occur together.



Dyspraxia is 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.

A Speech and Language Therapist 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 skills are affected by ABI, then a child may have difficulties with communication:

Attention and concentration

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

Memory

A child with memory problems may have difficulty with word recall or remembering names.

Executive function

Executive function is a term that refers to a wide range of skills that are 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 problems that 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](#)'.

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 problems 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

www.brain-injury.nz

www.headway.org.uk/about-brain-injury/individuals/effects-of-brain-injury/communication-problems

www.braininjuryhub.co.uk/information-library/talking-to-children-with-abi

Sources of information

<http://www.braininjuryhub.co.uk/information-library>

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

<https://www.headway.org.uk/communication-problems-after-brain-injury.aspx>

Resources

Information provided by Meningitis Now and Meningitis Research Foundation April 2017

More information can be found at meningitisnow.org and meningitis.org

