Brain injury

Introduction

The following information is for the public, whether you work with, are related to, or are someone who has had an acquired brain injury (ABI). The information covers ABI across the lifespan and across the services that are likely to see people with an ABI.

You may also find the **RCSLT communication after ABI top tips factsheet** useful.

The information on these pages is not exhaustive. If you or someone you know has had an ABI you should seek advice from your doctor, speech and language therapist (SLT) and health professional.

If you are an SLT, please refer to **RCSLT's ABI clinical guidance**.

Health and social care professionals, and any other professionals working with people with an ABI, can also see **RCSLT's downloadable document: 'The role of speech and language therapists (SLTs) within a multidisciplinary team for acquired brain injury' for additional information**.

If you have any suggestions or feedback about these pages, please **contact us**.

What is an acquired brain injury (ABI)?

An ABI is commonly defined as any injury or trauma to the head and/or brain which disrupts the function of the brain (NICE 2023, Centers for Disease Control and Prevention, n.d.). It can occur at any age from birth.

An ABI may involve the skull, the brain or its surrounding protective membranes. The injury can result in difficulty with speech, voice, language, communication and/or eating, drinking and swallowing (EDS).

Typically, a person with an ABI will be cared for by a multidisciplinary team (MDT) while they are in hospital and will then move to outpatient or community services.

Types of ABI

Several terms and labels are often used when talking about ABI. These include:

- brain injury
- traumatic brain injury
- head injury.

ABI is an umbrella term for several conditions that can result in brain injury. These include:

- stroke
- traumatic brain injury (e.g. falls, accidents)
- brain tumours and their treatment (e.g. radiotherapy, surgery)
- neuro-infections (e.g. meningitis, encephalitis, long COVID)
- oxygen deprivation (hypoxia) (e.g. cardiac arrest, surviving drowning, attempted suicide)
- some metabolic disorders (e.g. hypoglycaemia, hypokalaemia).

ABI also includes mild traumatic brain injury (mTBI), concussion and chronic traumatic encephalopathy (CTE).

Statistics

- ABI is a leading cause of death and disability in people aged under 40 in the UK (Headway, n.d.; APPG, 2018; UKABIF, 2025; Parsonage, 2016).
- An estimated 1.3 million people in the UK live with an ABI-related disability (UKABIF, 2025).
- ABI costs the UK economy an estimated £43 billion per year. This includes premature death, health and social care costs and loss of productivity (UKABIF, 2025).
- Wellbeing costs associated with ABI are an estimated £91.5 billion in the UK (UKABIF, 2025).
- Every year, there are approximately 335,000 hospital admissions with an ABI in the UK. That is approximately 918 a day, or one every 90 seconds. By comparison, someone is admitted to hospital with a stroke every four minutes (Headway, n.d.).
- TBI has the highest incidence of all common neurological disorders and poses a substantial public health burden globally (Maas et al, 2022).
- 85-90% of ABIs are classed as mild (Cassidy et al, 2004).
- Cases of ABIs are up 10% and head injuries are up 6% over the last 10 years. This is in comparison to strokes, which are up by 4% (UKABIF, 2025).

Recording ABIs comes with challenges that may affect the accuracy of statistics for these groups of people. For example, data is collected from hospital admissions. However, many people with an ABI, particularly an mTBI or concussion, are unlikely to be admitted to hospital. This could lead to an underestimation of the true number of incidents and long-term needs of people with an ABI.

Risk factors

An ABI can affect anyone. However, certain characteristics and behaviours can significantly increase risk or influence recovery outcomes, for example:

- age
- gender
- health-related conditions
- substance abuse
- socioeconomic risk
- race and ethnicity
- occupation and environment
- behaviour and lifestyle
- sports and recreational activities.

Impact of an ABI

An ABI can have a wide range of effects from mild to severe, with recovery varying from person to person. Some individuals may recover fully, while others may experience long-term challenges.

“Medical severity does not always correlate with functional severity” (DeMatteo et al, 2014) and this does not capture the broader, more significant consequences (physical, cognitive, communication, psychological) following an ABI. An individual with a mild TBI can still experience significant and long-term consequences on daily functioning, while someone with a more severe TBI may experience less significant consequences.

70-90% of all treated brain injuries are defined as mild (Cassidy et al, 2004) and health-related quality of life (HR-QoL) can be impacted regardless of severity of medical diagnosis (DeMatteo et al, 2014).

Effects of an ABI can include physical, cognitive, emotional, behavioural, communication and personality changes. Other long-term impacts may include:

- reduced social interactions and increased isolation
- impact on family and carer
- loss of employment and/or education
- change to identity
- societal and economic cost and burden
- reduced health-related quality of life (HR-QoL)
- health inequality
- negative mental health
- substance misuse
- pressure on the criminal justice system
- homelessness
- poorer mental capacity and decision making
- premature mortality.

Impact on communication

A person may experience difficulties with many aspects of communication following an ABI. These can include difficulties with:

- speech – due to muscle weakness (dysarthria) or difficulty controlling the muscles used for speaking (apraxia)
- expressing oneself through language, such as difficulties with finding words or putting sentences together (aphasia)
- organising and expressing thoughts, feelings and ideas (cognitive communication disorders)
- understanding others, particularly more complex language
- social communication or following the rules of a conversation – they may interrupt others, talk excessively on one topic, change topics suddenly, misinterpret non-verbal cues, or struggle to self-monitor what they say
- thinking and reasoning
- memory – they may find it difficult to hold on to information, which can make it difficult to have a conversation
- emotion and behaviour – frustration, anxiety, depression or personality changes can impact communication and difficulties with communication and emotional processing can lead to challenging behaviour
- fatigue – communicating can require a lot of concentration and effort and be tiring for a person with ABI
- vision and hearing – affecting how an individual receives, processes and produces speech and language.

These changes can affect a person's ability to speak, understand, read, write and interact socially, which can impact their relationships and daily life. Every ABI is unique and the impact on communication varies from person to person.

Impact on eating, drinking and swallowing (EDS)

ABI can weaken or impair the muscles used for eating, drinking or swallowing, making it difficult to eat and drink as well as to manage saliva safely.

Cognitive changes can also impact EDS. These may include impulsivity, overloading or sensory-seeking behaviours (a need for increased or reduced sensory input such as physical, visual or audible to stimulate or regulate the nervous system).

This may lead to:

- choking or coughing when eating or drinking
- malnutrition and dehydration
- increased risk of chest infections or aspiration pneumonia due to food/drink entering the lungs.

Role of speech and language therapists (SLTs) after an ABI

ABI can have a significant impact on a person's communication and eating, drinking and swallowing (EDS). Speech and language therapy plays a crucial role in individuals regaining these skills where possible and compensating where full recovery is not possible, helping them participate in activities they enjoyed before and improving their quality of life.

SLTs work with individuals with an ABI to improve their communication and EDS abilities. They also work with their loved ones and the professionals who work with them.

Assessment

SLTs assess a person's speech, language, communication and EDS to determine the impact their ABI has had. This may involve:

- assessments to check understanding, expression and how the individual interacts with others
- talking to other professionals involved in a person's care
- talking to friends, family and carers to gain their perspective on how communication or EDS has been affected
- completing EDS assessments, which may include observing a person eating and drinking, using a videofluoroscopy (a moving X-ray of swallowing) or FEES (fibreoptic endoscopic evaluation of swallowing – which is a camera placed through the nose to look down the throat at swallowing).

Assessments like these may take place over several sessions and in different contexts (e.g. at work and at home), to see how communication and EDS have been affected after an ABI.

Communication therapy

SLTs can provide communication therapy which, depending on the impact of an ABI, may involve:

- speech exercises to improve clarity and the strength and coordination of speech muscles
- language therapy to help with understanding what others are saying, providing strategies to help find their words and sentence-building
- cognitive communication strategies to assist with successful social interactions
- introducing alternative and augmentative communication (AAC), such as communication boards or speech-generating devices, for those who struggle with verbal speech
- education and training with the person and their family, friends and professionals about their ABI, its impact on communication and/or EDS and how to help/support
- working with families, friends, carers and professionals to support the implementation of strategies.

Eating, drinking and swallowing (EDS) therapy

SLTs provide support to help individuals eat, drink and swallow more safely. They may do this by:

- supporting to increase participation in eating and drinking, particularly in social settings
- providing exercises to improve swallowing
- recommending postural changes to reduce choking or aspiration risks
- supporting with fluid and diet modification
- having discussions about eating and drinking with acknowledged risk and making choices in the individual's best interests.

Family and caregiver support

Families and carers play an important role in helping a person improve their communication and EDS.

SLTs work with families and carers to provide guidance on how to support their loved one's communication and EDS needs.

Speech and language therapy support may include counselling and advocacy, as well as working in a psychologically informed way to support the individual, their families and carers around communication and EDS changes.

Working with others

Multidisciplinary team (MDT) involvement and working jointly with various agencies such as charities are vital to supporting an individual's communication and EDS.

An MDT might include:

- occupational therapists
- physiotherapists
- dieticians
- therapy assistants
- psychologists
- medical and nursing staff
- teachers
- youth workers
- social workers.

Training and education

Training and education are large parts of the speech and language therapy role. Training could include raising awareness of the role of speech and language therapy in ABI rehabilitation, communication and/or EDS following an ABI.

Long-term management

ABIs can have long-lasting effects. As a result, SLTs may be involved in long-term rehabilitation, adapting therapy as needed. SLTs may provide support as and when needed during a person's life, particularly when there may be changes in a person's environment or circumstances that could result in a change in communication needs. This may include, for example, children and young people (CYP) with an ABI that occurred while their brain was still developing, or individuals who are preparing to return to work, where communication demands may change.

Children and young people (CYP)

ABI is a leading cause of disability for children and young people (Child Brain Injury Trust, 2018) and outnumbers any other neurodevelopmental disorder in the paediatric population. However, 90% of ABIs in children and young people are classified as 'mild' and often do not require hospital admission or receive a formal diagnosis and so their impact is often hidden. Effects from an ABI may not be easily identified and require long-term monitoring.

An additional challenge in this age range, especially in infants, is that they may not necessarily be able to communicate their symptoms. This often means an ABI is not picked up until it presents itself in their behaviour, resulting in delays in support.

Impairment and dysfunction in cognitive, motor, behavioural and social functioning skills commonly impact development and education, as well as relationships, behaviour and self-regulation, feelings and actions. This can impact on the child or young person's ability to take part in activities crucial for their development (Kreutzer et al, 2016).

In children and young people, an ABI is not a single event like it is in an adult, as it occurs in a still-developing brain. This means its effects will not only occur at the time of the event, but also post-injury and throughout the child's development. These effects are categorised in the following ways:

1. Effects of an ABI at the time of the brain injury are often physical or physiological, such as limb weakness and headaches.
2. Late effects of an ABI are not seen until the affected area of the brain fully develops (Limond, 2015; Klonoff et al, 1993). These can affect growth (if the injury involves the pituitary gland), autonomy and social behaviours.
3. Persistent effects following an ABI are effects or difficulties that remain but can be coped with (Catroppa & Anderson, 2007; Shaklai et al, 2014) eg fatigue, memory, pain.
4. Cumulative effects of an ABI are effects or difficulties that become increasingly worse as the CYP develops (Sans et al, 2009), for example emotions and emotional regulation.

Neuroplasticity is the brain's ability to adapt and reorganise itself. While it was once thought that younger brains are more able to adapt to the injury due to being more neuroplastic, it is now known that the younger the child is at the time of injury, the more vulnerable they are (Alighieri et al, 2021). The older they are at the time of injury, the better the functional outcomes.

Neurorehabilitation

“Rehabilitation is a process of assessment, treatment and management by which the individual (and their family/carers) is supported to achieve their maximum potential for physical, cognitive, social and psychological function, participation in society and quality of living” (BSRM, 2014).

The principles of neurorehabilitation use neuroplasticity to help the brain recover and compensate following an ABI.

Individuals with an ABI should be seen by neurorehabilitation specialists from the time of injury onwards. This may include staying on a specialist neurorehabilitation ward or neurorehabilitation unit and/or receiving neurorehabilitation therapy in the community.

There should be a specialist MDT supporting at each stage of care and an SLT may be part of this specialist MDT.

In a medico-legal case, a brain injury case manager is likely to be appointed who will appoint the neurorehabilitation MDT and provide ongoing coordination of the MDT.

Summary

ABI can significantly impact communication and EDS and speech and language therapy plays a vital role in neurorehabilitation. By understanding the challenges, using supportive strategies and accessing appropriate resources, individuals with an ABI can improve their quality of life and regain independence.

If you or someone you know is struggling with communication or EDS difficulties after an ABI, seeking help from a speech and language therapist can make a huge difference.

Further speech and language therapy support

If you believe that you or a person with an ABI may benefit from speech and language therapy support, seek referral to your local speech and language therapist via your GP.

If you or they have worked with speech and language therapy in the community before, you or they may be able to make a re-referral directly.

Individuals should access speech and language therapy at any point, as their needs and goals change over time.

General tips and strategies for supporting someone with ABI

For communication

See **RCSLT top tips factsheet**.

For swallowing

- Follow EDS recommendations and guidance that have been put in place by the speech and language therapist.
- Follow any dietary recommendations that have been provided, such as modified food and drink textures.
- Encourage slow eating. Taking small bites and sips can reduce the risk of choking.
- Ensure proper posture when eating and drinking. Sitting upright helps with safe swallowing.
- Follow any equipment recommendations that have been provided (eg appropriate spoon size, control flow cups and adaptive equipment that helps a person feed themselves can all help reduce the risk of choking and aspiration).
- Be alert to signs of aspiration. Coughing, throat clearing, a wet-sounding voice or repeated chest infections after eating may indicate swallowing issues. If you notice any of these symptoms, seek professional help.

Many effects of an ABI (e.g. memory problems, fatigue and speech difficulties) are not immediately visible but still impact daily life. It is important to raise awareness of the hidden difficulties of an ABI.

Resources

Charities and networks

- **Brainkind**
- **The Brain Charity**
- **The Brain Tumour Charity**
- **Change Grow Live**
- **Child Brain Injury Trust**
- **The Children's Trust**
- **Dyscover**
- **FND Action**
- **FND Hope UK**
- **FND FrieNDs**
- **The FND Society**
- **Headway – the brain injury association** – has printable information, videos and educational materials for individuals and families
- **Head Injury Information Directory**
- **Hidden Disabilities Sunflower**
- **The Neurological Alliance**
- **Pink Concussions**
- **SameYou**
- **Scottish Acquired Brain Injury Network**
- **The Silverlining Brain Injury Charity**
- **The Society for Research in Rehabilitation**
- **Stroke Association**
- **The United Kingdom Acquired Brain Injury Forum** (UKABIF)

Resources

- **ABI Communication Lab** (Interact-ABI-lity, Social-ABI-lity, Convers-ABI-lity and Cyberability) – free communication training
- **Driving after brain injury**
- **Headway brain injury identity card**
- **Neurological disorders: assessing fitness to drive**
- **Stroke Association communication card**

Returning to education

- **Children and young people with acquired brain injury – guiding their return to education**
- **Concussion return-to-school guidance**
- **National Acquired Brain Injury in Learning and Education Syndicate (N-ABLES)**

Transitioning to adult services

- **Child Brain Injury Trust – From 16-18 – what can I expect?**
- **Council for Disabled Children – Transition Information Network**

Medicolegal

- **BABICM** – if someone has a legal case to pursue, you should find a specialist lawyer rather than a generalist
- **Headway** – approved solicitors list

National guidance

British Society of Physical & Rehabilitation Medicine (BSPRM)

- **Cancer rehabilitation position paper**
- **Position statement on deprivation of liberty in the rehabilitation setting**
- **Recommendations for vocational rehabilitation**
- **Rehabilitation in the wake of COVID-19**
- **Standards for rehabilitation services**

National Institute for Health and Care Excellence (NICE)

- **Head injury** quality standard QS74
- **Transition from children's to adults' services** quality standard QS140
- **Major trauma: assessment and initial management** guidelines NG39
- **Head injury: assessment and early management** guidelines N232
- **Rehabilitation for chronic neurological disorders including acquired brain injury** guidelines NG252
- **Stroke rehabilitation in adults** guidelines NG236
- **Rehabilitation after traumatic injury** guidelines NG2111

Royal College of Physicians (RCP)

- **Prolonged disorders of consciousness following sudden onset brain injury guidelines**

Royal College of Paediatric and Child Health (RCPCH)

- **Stroke in childhood – clinical guideline for diagnosis, management and rehabilitation paediatric stroke guidelines**

Northern Ireland

- **Brain Injury Matters**
- **Brainwaves NI**
- **FNDMattersNI**
- Department of Health (2022) **Stroke Action Plan**

Scotland

- Scottish Government **Neurological care and support: framework for action 2020 – 2025**
- Scottish Government **Rehabilitation and Recovery: A Once for Scotland Person-Centred Approach to Rehabilitation in a Post-COVID Era**

Wales

- UKABIF **ABI return to education guidance for Wales**
- UKABIF **Concussion return to school guidance for Wales**
- Welsh Government **All Wales guidelines for the management of devastating brain injury** (2017)
- Welsh Health Specialised Services Committee (WHSSC) **specialised services commissioning policy: specialised neurological rehabilitation**

Key dates

- **Headway's Action for Brain Injury (ABI) week** – May
- National concussion awareness day – third Friday in September