

Emotional and behavioural difficulties after encephalitis

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Following encephalitis, some people may experience emotional and behavioural changes including low mood, anxiety, depression, frustration, aggression, impulsivity, disinhibition, and/or poor emotional regulation. Family members and carers may report that their loved ones' personality has 'entirely changed'. For example, they may suggest that their loved one is more laid-back than they used to be, more 'extroverted', more self-centred or more irritable than was previously the case.

These changes may reflect the direct effect of encephalitis on brain systems that help us to perceive, understand, express our emotions and control our behaviour. Emotional and behavioural changes may also reflect an individual's reaction to the difficulties in everyday functioning as a result of other impairments subsequent to encephalitis. The emotional impact of encephalitis will be different for each individual depending on the brain systems affected by encephalitis, their personality, their emotional state prior to their illness and their social support network.

Emotional lability

Following encephalitis, some people may experience uncharacteristic extremes of emotion, which are difficult to control. For example, they may find that they become very tearful without warning or in response to something sad, such as a movie. Others find that they laugh or smile inappropriately, such as when being told a sad story or bad news.

For others, rather than there being an increase in emotion, the brain injury can cause what seems to be an absence or flattening of emotion. A person may intellectually 'know' that something is distressing, but they are detached from the experience and do not 'feel' distressed or upset.

Frustration, anger and aggression

Frustration and anger are common following encephalitis. Anger may reflect the direct effect of encephalitis on the brain systems that control emotional responses. For example, following encephalitis a person may have a shorter fuse or/and say/do things without thinking due to changes in frontal brain systems. It can be more difficult to control emotional reactions with an increase in anger outbursts. At the extreme, this may include acting with verbal or physical aggression. Frustration, irritability and anger may also be a response to the everyday difficulties that arise from cognitive or physical changes following encephalitis. For example, it can be irritating to misplace belongings or not be able to get the words out when you want to. Other people may express frustration at not being able to return to work or join in their usual social activities.

Perception of emotion

Encephalitis may affect the brain systems involved in the perception and understanding of emotion. This may make it difficult to 'read' and understand emotions in others as portrayed by their tone of voice or facial expression. Difficulty recognising and understanding these non-verbal social cues may lead to misunderstandings and social difficulties, or people being seen as 'lacking in empathy' or being 'self-centred'.

Anxiety

Anxiety and worry may occur after encephalitis. This may reflect the direct effects of encephalitis on the emotional regulatory centres of the brain, such that the sense of threat is amplified or there is difficulty taking on feedback to dampen down an increased sense of anxiety. Anxiety can also be a response to the changes to an individual's world after encephalitis as a person tried to make sense of cognitive, emotional and behavioural changes and the limitations to everyday life imposed by these changes. Previous coping strategies to manage stress or worry may no longer be available. Some people experience worry and anxiety related to their memory and attention problems as they find it difficult to keep track of plans, what they have done or where they have put things.

Depression

Depression is a common response to the life changes that occur following encephalitis. Low mood and symptoms of depression may reflect the difficulty of achieving personal goals or a changed ability to take part in their usual activities, including work or social groups. A person may mourn the end of a relationship, the inability to pursue a former active social life or chosen career, or changes to family roles and capabilities. Feeling sad is distinct from the pervasive low mood associated with depression.

Changes in sense of self

A greater understanding of the psychological reaction to encephalitis can lead to the development of techniques to help people begin to make sense of these changes and have a better social outcome. Following encephalitis many people experience a change to their sense of who they are. This may be due to changes in what they are able to do at home, at work, at school or with their family or friends due to the direct effects of the illness. There may be a discrepancy between 'who I was' before my illness compared to 'who I am now'. It has been suggested that the more a person perceives a discrepancy between who they are now and who they were before the illness, the higher the level of emotional distress such as low mood or anxiety.

Impulsivity and disinhibition

Impulsive and disinhibited behaviour can manifest in a number of ways. The person may appear to lack 'tact' after encephalitis. They may be less discriminate in their choice of sexual partners or engage in risky practices that were not characteristic of them prior to this illness. Alternatively, there may be a problematic use of drugs and alcohol.

Trauma and post-traumatic stress disorder (PTSD)

Experiencing encephalitis can be traumatic in itself, and for some people, aspects of their hospital stay - particularly if it involved admission to an intensive care unit - can leave lasting psychological effects. Some individuals may have experienced frightening experiences or interactions during the acute phase of their illness, and the confusion may have been exacerbated by sleep disruption, disorientation, and possibly by medication too. After recovery, some people develop symptoms of post-traumatic stress disorder (PTSD), including flashbacks, nightmares, intrusive thoughts, hyper-vigilance (being constantly on guard for threat), or emotional numbness. Psychological support, including trauma-focused therapy, can be helpful in managing these experiences.

Psychosis symptoms

In rare cases, a small number of individuals may experience what is known as psychotic symptoms after the resolution of their encephalitis. These can include hallucinations (seeing, hearing, or feeling things that are not there), unusual or odd beliefs and losing touch with reality. These symptoms can be frightening for both the person experiencing them and for their loved ones. However, it is important to note that such symptoms are rare and in the context of their occurrence after encephalitis often resolve with appropriate medical treatment and support. If these symptoms do occur, specialist mental health input including assessment by a specialist kind of doctor called a neuropsychiatrist may be required.

Dealing with emotional and behavioural difficulties after encephalitis

A clinical neuropsychologist/paediatric neuropsychologist can help to understand these difficulties through a comprehensive assessment to allow development of recommendations for rehabilitation and recovery. A neuropsychiatrist might offer a number of different treatment strategies, including medication. Please see

factsheets on **Neuropsychological assessment**, **Managing anger after encephalitis**, **Managing depression after encephalitis** and **Behaviour management in children after encephalitis**. Alternatively, you can read about the whole effects of encephalitis, recovery and rehabilitation in the booklet **Encephalitis: after-effects, recovery and rehabilitation**.

FS015V6 Emotional and behavioural difficulties after encephalitis

Date created: June 2001; Last update: July 2025; Review Date: July 2028

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