Headway

the brain injury association

factsheet

Coma Questions

Whether it lasts for a few seconds or a few weeks, the usual immediate effect of brain injury is a loss of consciousness. Coma can be defined as a state of depressed consciousness where a person is unresponsive to the outside world. It is not fully understood, but is thought to be associated with activities in the brainstem.

Levels of coma

There are different levels of coma, ranging from very deep coma where the patient shows no response to pain, to more shallow levels, where the patient responds to pain by movement or opening eyes. Still shallower levels can occur, where the patient is able to make some response to speech.

Glasgow Coma Scale (GCS)

The GCS is a very simple, easy to administer technique which is used to rate the severity of coma. It assesses the patient's ability to open their eyes, move and speak. The total score is calculated by adding up the scores from the different categories, shown in the table below, and ranges from a minimum of 3 to a maximum of 15.

Best motor response	
6	Obeys commands
5	Moves within the general locale
4	Withdraws
3	Abnormal muscle bending and flexing
2	Involuntary muscle straightening and extending
1	None

Verbal responses	
5	Is orientated
4	Confused conversation
3	Inappropriate words
2	Incomprehensible sounds
1	None

Eye opening	
4	Spontaneous
3	To speech
2	To pain
1	None

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Coma stimulation programmes

The basic principle of a coma stimulation programme is often multi-sensory. Hearing, touch; smell, taste and vision are stimulated individually. There is still some controversy over the effectiveness of attempting deliberately to stimulate the person in coma. Most would say that such programmes have some beneficial effect, and that they give the relatives something useful to do. A coma stimulation programme is outlined in the Headway publication 'Coma after brain injury'.

Recovery from coma

Recovery from coma is a gradual process, starting with the person's eyes opening, then responding to pain, and then responding to speech. People do not just wake up from a coma, and say, 'Where am I?' as is sometimes portrayed in films. The length of coma is one of the most accurate predictors of the severity of long-term symptoms. The longer the coma, the greater the likelihood of residual symptoms, particularly physical disabilities.

Behaviour on emergence from coma

After a coma, during a period known as Post Traumatic Amnesia (PTA), the patient's behaviour may well be restless, disinhibited and agitated. Uncharacteristic behaviour such as swearing, shouting and masturbating are not unusual, but are these are best ignored, as seeing other people's distress may only increase the patient's agitation or distress. An individual cannot be held responsible for their behaviour during this period. This is a difficult time for relatives, but it is important to remember that the patient will come out of it.

Length of Post Traumatic Amnesia (PTA)

Length of PTA, as with length of coma, is important. This is the best indicator of severity of brain injury. PTA is assessed by asking the patient a number of questions at regular intervals. The first group of questions is concerned with awareness of time, place and person, for example, 'What is your name?', 'What day of the week is it?' A second group of questions relates to the patient's awareness of the accident, e.g. 'What was your last memory before the accident?' A patient deep in PTA will not be able to answer these questions correctly. As the patient emerges from PTA, the answers will become more accurate and more sensible. For more information on PTA, see our factsheet 'Post Traumatic Amnesia explained'.

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Persistent Vegetative State (PVS)

A small number of people sustain a brain injury so severe that they remain in a state of coma for months and years. They do not recover sufficient consciousness to make any form of communication, but can breathe without mechanical assistance. When this is the case, despite application of rehabilitation measures for at least three years, a person may be described as being in a Persistent Vegetative State, or PVS. There are normally just less than 100 people in the UK in PVS at any one time.

Locked-in syndrome

Locked-in syndrome is a rare diagnosis which is applied to people who are conscious and able to see and possibly hear but are paralysed and unable to speak because of damage to the brain stem. Often those patients can move their eyes voluntarily in response to stimuli.

Useful websites

www.headway.org.uk - Headway – the brain injury association's website

www.comarecovery.org - a US support organisation for coma survivors

www.waiting.com - a website dedicated to those with a loved one in a coma

www.rhn.org.uk - website of the Royal Hospital for Neuro-disability

Further Information

Our booklets 'Coma after brain injury' and 'Coping with a severe brain injury' explain all of the areas covered here in more detail. **If you would like to discuss any of the issues covered here, or any other aspects of brain injury, please call our free, confidential helpline on 0808 800 2244. Alternatively, you can email us on helpline@headway.org.uk.**

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