

Early rehabilitation important for recovery after severe traumatic brain injury

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Early rehabilitation interventions seem to be essential for how well a patient recovers after a severe brain injury. It might even increase the chances for long-term survival, according to researchers at the Sahlgrenska Academy.

In a series of studies, Trandur Ulfarsson, doctoral student at the Sahlgrenska Academy, University of Gothenburg, has explored the long-term effects of traumatic brain injuries caused for example by accidents or violence.

The studies, where 280 Swedish and Icelandic participants were followed up 1-11 years after the injury, show a clear association between how quickly patients get access to rehabilitation and how well they recover.

Functional activity improved

'We found that the functional activity – for example how independent the patients are in their daily activities and how fast they can return to work – is substantially improved among those who are admitted to inpatient rehabilitation care early,' says Ulfarsson, who presents the results in his doctoral thesis.

The studies also show that severe [brain injury](#) often leads to an impaired pituitary function, most often lack of growth hormone, which in turn

may cause obesity.

Being unemployed or on [sick leave](#) prior to the injury also seems to be associated with worse functional activities performance and quality of life several years after the injury.

Higher risk of dying

Moreover, the Gothenburg studies show that men who suffer a severe [traumatic brain injury](#) have a five times higher risk of dying 10 years after the injury; for women, the risk is eight times higher. These results confirm a recent study from Karolinska Institutet.

The increased risk can be attributed to illnesses and disabilities lingering on for several years after the injury.

'The participants reported lasting disability, and low quality of life, with a complex range of physical, cognitive, behavioral and emotional disturbance'.

Important information

Ulfarsson says that the studies provide important information for brain injury victims, their families and friends, and the healthcare sector.

'One conclusion is that a severe traumatic brain injury should be considered a chronic medical condition that requires professional care and support for a very long time. Our studies provide valuable information that will help us improve outcome predictions, optimise the rehabilitation process and evaluate treatment effects for these patients,' he says.

According to Ulfarsson, concrete factors that could increase long-term survival include admission to rehabilitation support at the right time, special interventions for patients who were unemployed or on sick leave prior to the injury, and assessment of pituitary function in overweight patients.

The doctoral thesis *Predictors of long-term outcome after severe traumatic brain injury* was presented 17 January.

More information: Link to the doctoral thesis:
gupea.ub.gu.se/handle/2077/34395

Provided by University of Gothenburg

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