

Head injuries triple long-term risk of early death

January 15 2014

Survivors of traumatic brain injuries (TBI) are three times more likely to die prematurely than the general population, often from suicide or fatal injuries, finds an Oxford University-led study.

A TBI is a blow to the head that leads to a skull fracture, internal bleeding, loss of consciousness for longer than an hour or a combination of these symptoms. Michael Schumacher's recent skiing injury is an example of a TBI. Concussions, sometimes called mild TBIs, do not present with these symptoms and were analysed separately in this study.

Researchers examined Swedish medical records going back 41 years covering 218,300 TBI survivors, 150,513 siblings of TBI survivors and over two million control cases matched by sex and age from the general population. The work was carried out by researchers at Oxford University and the Karolinska Institute in Stockholm.

'We found that people who survive six months after TBI remain three times more likely to die prematurely than the control population and 2.6 times more likely to die than unaffected siblings,' said study leader Dr Seena Fazel, a Wellcome Trust Senior Research Fellow in Oxford University's Department of Psychiatry. 'Looking at siblings who did not suffer TBIs allows us to control for genetic factors and early upbringing, so it is striking to see that the effect remains strong even after controlling for these.'

The results, published in the journal JAMA Psychiatry, show that TBI



survivors who also have a history of <u>substance abuse</u> or psychiatric disorders are at highest risk of <u>premature death</u>. Premature deaths were defined as before age 56. The main causes of premature death in TBI survivors are suicide and <u>fatal injuries</u> such as car accidents and falls.

'TBI survivors are more than twice as likely to kill themselves as unaffected siblings, many of whom were diagnosed with psychiatric disorders after their TBI,' said Dr Fazel. 'Current guidelines do not recommend assessments of mental health or suicide risk in TBI patients, instead focusing on short-term survival. Looking at these findings, it may make more sense to treat some TBI patients as suffering from a chronic problem requiring longer term management just like epilepsy or diabetes. TBI survivors should be monitored carefully for signs of depression, substance abuse and other <u>psychiatric disorders</u>, which are all treatable conditions.'

The exact reasons for the increased risk of premature death are unknown but may involve damage to the parts of the brain responsible for judgement, decision-making and risk taking. TBI survivors are three times more likely to die from fatal injuries which may be a result of impaired judgement or reactions.

'This study highlights the important and as-yet unanswered question of why TBI survivors are more likely to die young, but it may be that serious brain trauma has lasting effects on people's judgement,' suggests Dr Fazel. 'People who have survived the acute effects of TBI should be more informed about these risks and how to reduce their impact.'

'When treating traumatic brain injuries focus is placed on immediate treatment and recovery of patients,' says Dr John Williams, Head of Neuroscience and Mental Health at the Wellcome Trust. 'This new finding offers important insight into the longer-term impact of TBI's on the brain and their effect on survival later in life. We hope that further



research into understanding which parts of the brain are responsible will help improve future management programmes and reduce the potential for premature death.'

Even relatively minor brain injuries, concussions, had a significant impact on early mortality. People with concussion were found to be twice as likely to die prematurely as the control population, with suicide and fatal injuries as the main causes of death. This raises issues surrounding concussions in a wide range of sports, from American football, rugby and soccer to baseball and cricket.

There were 196,766 head injuries requiring hospital visits in 2012-13 in England alone, of which 125,822 led to TBIs. Approximately 1.7 million people in the United States and one million people in Europe are hospitalised after TBIs each year. Typical causes include vehicle accidents, falls and sporting injuries.

Provided by Oxford University

Citation: Head injuries triple long-term risk of early death (2014, January 15) retrieved 3 May 2024 from <u>https://medicalxpress.com/news/2014-01-injuries-triple-long-term-early-death.html</u>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.