

# [Editorial: neurotrauma: from emergency room to back to day-by-day life](https://assignbuster.com/editorial-neurotrauma-from-emergency-room-to-back-to-day-by-day-life/)

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Editorial on the Research Topic
[NEUROTRAUMA: From Emergency Room to Back to Day-by-Day Life](https://www.frontiersin.org/research-topics/4043/neurotrauma-from-emergency-room-to-back-to-day-by-day-life)

Traumatic brain injury (TBI) is a nondegenerative and non-congenital insult to the brain from an external mechanical force that can lead to permanent or temporary impairment of cognitive, physical, and psychosocial functions ( [1](#B1) ). TBI is considered a “ silent epidemic” not only due to its magnitude, but also because it affects mostly young and productive individuals ( [2](#B2) ).

Most patients with TBI return home after the critical phase of hospital management. Although some patients manage to regain some degree of independence in their self-care, many are still incapable of applying critical thinking to decision-making processes, providing for their family needs, or continuing work, school or social activities. Moreover, many also manifest mood alterations and depression. As such, patient rehabilitation after hospital discharge is a critical step in returning to their day-by-day lives ( [3](#B3) ).

The objective of this *Frontiers in Neurology* Research Topic is to present the latest findings and views regarding the pathophysiology and treatment of TBI. It is comprised of 10 papers, each offering a unique view and understanding of how TBI can be detected and managed from the emergency room to back to day-by-day life.

[Hayashi et al](https://doi.org/10.3389/fneur.2018.00189) . evaluated the cortical excitability during the chronic phase of TBI in victims diagnosed with diffuse axonal injury (DAI). [Amorim et al](https://doi.org/10.3389/fneur.2017.00164) . in turn, studied the effects of transcranial direct current stimulation (tDCS) in patients with persistent post-concussion syndrome who demonstrated cognitive deficits in long-term episodic memory, working memory, and executive function following mild TBI. [Hashim et al](https://doi.org/10.3389/fneur.2017.00097) . used diffusion tensor imaging to investigate the apparently normal white matter (assessed by routine magnetic resonance imaging) in the brains of subjects with sub-acute and chronic TBI. [Oliveira et al](https://doi.org/10.3389/fneur.2017.00044) . studied the usefulness of transcranial color-coded duplex sonography for evaluating TBI patients. [Vieira et al](https://doi.org/10.3389/fneur.2016.00178) . described the outcome for patients with a primary diagnosis of DAI 6 months after trauma and identified sociodemographic and clinical factors associated with mortality and dependence at this time point. [Dambinova et al](https://doi.org/10.3389/fneur.2016.00172) . hypothesized that neurotoxicity AMPA, NMDA, and kainite receptor biomarkers might be utilized as part of a comprehensive approach to concussion evaluations. [Popovic et al](https://doi.org/10.3389/fneur.2016.00081) . in turn, described a case of a man with non-traumatic spinal cord injury that was submitted to functional electrical stimulation therapy to restore voluntary reaching and/or grasping function of his hand. [Khong et al](https://doi.org/10.3389/fneur.2016.00156) . conducted a systematic review regarding the evidence for the use of diffusion tensor imaging parameters in the human brain as a diagnostic tool for and predictor of post-concussion syndrome after a mild traumatic brain injury. [Kirmani et al](https://doi.org/10.3389/fneur.2016.00032) . reviewed the literature to understand the role Lastly, of anticonvulsants in the treatment of posttraumatic epilepsy. [Rodrigues et al](https://doi.org/10.3389/fneur.2016.00038) . conducted a review of existing literature regarding the effects of soccer heading on brain structure and function.

## Author Contributions

All authors listed have made a substantial, direct and intellectual contribution to the work, and approved it for publication.

## Conflict of Interest Statement

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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