Severe Traumatic Brain Injury Epidemiology

- Post-traumatic hydrocephalus after decompressive craniectomy: a multidimensional analysis of clinical, radiological, and surgical risk factors
- Mesenchymal Stromal Cell Secretome and Its Key Bioactive Metabolites Induce Long-Term Neuroprotection After Traumatic Brain Injury in Mice
- Biomarkers of traumatic brain injury: narrative review and future prospects in neurointensive care
- Large-scale survey, animal models and computational modeling identify histological neurodegenerative biomarkers for traumatic optic neuropathy
- Timing Matters: A Comprehensive Meta-Analysis on the Optimal Period for Cranioplasty After Severe Traumatic Brain Injury
- Is level 1 trauma care necessary for all severely injured older patients? Evaluating undertriage and feasibility of care in major and non-major trauma centres in the Netherlands
- Wearing a Guardian Cap Does Not Mitigate On-field Head Impact Severity
- Characteristics of traumatic brain injury-related healthcare visits across social determinants of health: A population-based birth cohort study

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see also Traumatic Brain Injury Epidemiology.

56–60% of patients with GCS score ≤8 have 1 or more other organ systems injured. 25% have “surgical” lesions.

The COVID-19 pandemic has led to severe containment measures to protect the population in France. The first lockdown modified daily living and could have led to a decrease in the frequency of severe traumatic brain injury (TBI). Containment related to the COVID-19 pandemic has resulted in a modification of the mechanisms of severe TBI in Normandy, which was associated with a decline in the rate of short-term death in intensive unit care. [1)].

COVID-19 has had a significant impact on both the volume and mechanism of trauma referrals to the National Neurosurgical Centre in Ireland, with falls below 2 m the most common mechanism of trauma referral across both years [2)]

56–60% of patients with GCS score ≤ 8 have 1 or more other organ system injured [3)].

In Spain there is a 13% reduction in the frequency of severe TBI from the first to the last time period.

An increase in the mean age from 35 to 43 years, whereas the frequency of severe TBI according to sex remained approximately the same during the last decades of life. A distinct change was observed in the injury mechanism; traffic accidents decreased from 76% to 55%, particularly those involving 4-wheeled vehicles. However, falls increased significantly, especially in older women, and contusion and subdural haematoma were the most frequent structural injuries. Motor scores could not be reliably assessed for the last time period because of early intubation and sedative drug use [4)].

Acute subdural hematoma (ASD) is seen in 12% to 29% of severe traumatic brain injury (TBI)

1)
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2)
Horan J, Duddy JC, Gilmartin B, Amoo M, Nolan D, Corr P, Husien MB, Bolger C. The impact of COVID-19 on trauma referrals to a National Neurosurgical Centre. Ir J Med Sci. 2021 Jan 7:1–13. doi: 10.1007/s11845-021-02504-7. Epub ahead of print. PMID: 33415689; PMCID: PMC7790516.
3)
Saul TG, Ducker TB. Effect of intracranial pressure monitoring and aggressive treatment on mortality in severe head injury. J Neurosurg. 1982 Apr;56(4):498-503. PubMed PMID: 6801218.
4)
Gómez PA, Castaño-Leon AM, de-la-Cruz J, Lora D, Lagares A. Trends in epidemiological and clinical characteristics in severe traumatic brain injury: Analysis of the past 25 years of a single centre data base. Neurocirugia (Astur). 2014 Jul 3. pii: S1130-1473(14)00072-4. doi: 10.1016/j.neucir.2014.05.001. [Epub ahead of print] PubMed PMID: 24998417.