

## Physiotherapy in patients with cranio-brain traumatism

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Head trauma is a traumatic injury to the skull and, when it reaches the brain, it can produce bleeding and clots. Depending on the severity of the trauma, it can generate physical sequelae and behavioral changes, which may appear soon after the trauma or in the medium term. **PURPOSE:** to verify the effects of electrical stimulation (NMES) and exercise in post-traumatic brain injury patients. A non-systematic review was performed based on randomized clinical trials in the PEDro and PubMed databases, published between 2009 and 2020. The articles with the highest score in the PEDro score were selected. The following keywords were used: traumatic brain injury. Six studies were selected. In one RCT, NMES induced reductions in chronaxis in the tibialis anterior, with a 1.5-day reduction in MV. An RCT, high-frequency or low-frequency NMES equally improved balance, dynamic gait and sleep quality, falls and headache frequency. In home patients, exercise increased functional reach testing and reduced Time Up and Go time. NMES improved post-void residual urine volume, void volume, maximum urinary flow rate, and Barthel Index scores after 8 weeks. Continuous cardiovascular reconditioning and moderate intensity improved cardiovascular fitness. There was no difference between groups in psychosocial functioning in either group. Rehabilitation of 4 h/day for 5 days/week improved functional independence. Intensive rehabilitation improves the early functional outcome of patients with TBI, but it must be continuous. Neurostimulation and exercise achieved significant improvements in strength, balance and gait, with different types of intervention in patients with head trauma. There is also an improvement in the cardiovascular response.

**Keyword:** Traumatic brain injury.

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