

Vitamin E

Oxidative stress is one of the crucial mechanisms conferring the damage to nervous tissue, and it is believed it could be, to some extent, influenced by dietary composition, largely by antioxidants contained in the diet. Under stressful conditions, cell-derived reactive oxygen species in the brain can induce the formation of lipid peroxides and the shifting of redox homeostasis. A review discusses the potential of vitamin E as a potent antioxidant and its derived molecules, including vitamin E-based lazaroids, in traumatic brain injury, summarizing the current state of knowledge of its role in TBI-associated dementia ¹⁾.

In selected cases, wound healing was found to benefit from a higher preoperative body temperature, topical vitamin E application and low patient stress levels ²⁾.

Adverse radiation effect (ARE) is one of the complications of stereotactic radiosurgery. Its treatment with conventional medications, such as corticosteroids, vitamin E, and pentoxifylline carries a high risk of failure, with up to 20% of lesions refractory to such medications ³⁾.

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Dobrovolny J, Smrcka M, Bienertova-Vasku J. Therapeutic potential of vitamin E and its derivatives in traumatic brain injury-associated dementia. *Neurol Sci*. 2018 Apr 7. doi: 10.1007/s10072-018-3398-y. [Epub ahead of print] PubMed PMID: 29627943.

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Geers NC, Zegel M, Huybregts JGJ, Niessen FB. The Influence of Preoperative Interventions on Postoperative Surgical Wound Healing in Patients Without Risk Factors: A Systematic Review. *Aesthet Surg J*. 2018 Mar 27. doi: 10.1093/asj/sjy074. [Epub ahead of print] PubMed PMID: 29596560.

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Fanous AA, Fabiano AJ. Bevacizumab for the treatment of post-stereotactic radiosurgery adverse radiation effect. *Surg Neurol Int*. 2016 Aug 2;7(Suppl 19):S542-4. doi: 10.4103/2152-7806.187531. eCollection 2016. PubMed PMID: 27583180; PubMed Central PMCID: PMC4982345.

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