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Cerebral Edema

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Synonyms

[Cytotoxic edema](#); [Vasogenic edema](#)

Definition

Cerebral edema is an increase in the water content of the brain that leads to brain swelling. It may be divided into two broad categories: vasogenic and cytotoxic.

Vasogenic edema involves a disruption in the blood-brain barrier with leakage of fluid from the intravascular space.

In cytotoxic edema, the blood-brain barrier is intact, and there is an increase in the intracellular fluid compartment.

Cross-References

- [Cerebral Perfusion Pressure](#)
- [Intracranial Pressure](#)

References and Readings

- Beaumont, A., Marmarou, A., & Ward, J. D. (2001). Intracranial hypertension mechanisms and management. In D. G. McClone (Ed.), *Pediatric neurosurgery* (pp. 619–633). Philadelphia: W. B. Saunders.
- Greenberg, M. S. (1997). *Handbook of neurosurgery*. Lakeland: Greenberg Graphics.
- Rosenblum, W. I. (2007). Cytotoxic edema: Monitoring its magnitude and contribution to brain swelling. *Journal of Neuropathology and Experimental Neurology*, 66(9), 771–778.