



1. Proc Natl Acad Sci U S A. 1997 Jul 22;94(15):8179-84.

**Intracisternal basic fibroblast growth factor enhances functional recovery and up-regulates the expression of a molecular marker of neuronal sprouting following focal cerebral infarction.**

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Focal cerebral infarction (stroke) due to unilateral occlusion of the middle cerebral artery in mature rats produces deficits in sensorimotor function of the contralateral limbs that recover partially over time.

We found that biweekly intracisternal injection of basic fibroblast growth factor (bFGF; 0.5 microg/injection), a potent neurotrophic polypeptide, markedly enhanced recovery of sensorimotor function of the contralateral limbs during the first month after stroke without apparent adverse side effects. Immunostaining for growth-associated protein 43 (GAP-43), a molecular marker of axonal sprouting, showed a selective increase in GAP-43 immunoreactivity in the intact sensorimotor cortex contralateral to cerebral infarcts following bFGF treatment.

These results show that bFGF treatment can enhance functional recovery after stroke, and that the mechanism may include stimulation of neuronal sprouting in the intact brain.

PMCID: PMC21577

PMID: 9223335 [PubMed - indexed for MEDLINE]