Neurorestoration after stroke.

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Authors: Tej D Azad, Anand Veeravagu, Gary K Steinberg

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Public Summary:
Recent advances in stem cell biology and neuromodulation have ushered in a battery of new neurorestorative therapies for ischemic stroke. While there is improved understanding of how stroke affects the brain, the ability to restore a patient's quality of life is still very limited. New therapeutic approaches, including cell transplantation and neurostimulation, focus on reestablishing the circuits that are disrupted by stroke by improving the growth of new neurons and the function of surviving neurons. The authors provide a broad overview of stroke pathophysiology and existing therapies to highlight the scientific and clinical implications of neurorestorative therapies for stroke.

Scientific Abstract:
Recent advancements in stem cell biology and neuromodulation have ushered in a battery of new neurorestorative therapies for ischemic stroke. While the understanding of stroke pathophysiology has matured, the ability to restore patients' quality of life remains inadequate. New therapeutic approaches, including cell transplantation and neurostimulation, focus on reestablishing the circuits disrupted by ischemia through multidimensional mechanisms to improve neuroplasticity and remodeling. The authors provide a broad overview of stroke pathophysiology and existing therapies to highlight the scientific and clinical implications of neurorestorative therapies for stroke.

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