



Neural Plasticity

Special Issue on
Acupuncture Therapies and Neuroplasticity

CALL FOR PAPERS

The brain has an excellent ability to adapt and change with experience. Neuroplasticity, including dendritic remodeling, synapse turnover, long-term potentiation (LTP), and neurogenesis, is a feature of the brain's response to the environment. Acupuncture as one of complementary therapies is widely used by physicians in clinical practice. Although many studies have tried to analyze the potential effects of acupuncture, the mechanisms are not fully elucidated yet.

Various diseases for which acupuncture is known to be effective are neurodegenerative diseases, pain, mood disorders, and so on. A large amount of studies considered that acupuncture plays a therapeutic role by facilitating neuroplasticity. Neurodegenerative diseases, including stroke, Alzheimer's disease (AD), and Parkinson's disease (PD), have a common pathological factor, which is the massive death of neurons. For neurodegenerative diseases, previous studies have reported the phenomena of raising enhanced adult neurogenesis by acupuncture. Acute pain induces depressed mood, and chronic pain is known to cause depression. Depression, meanwhile, can also adversely affect pain behaviors. Pain and depression independently induce long-term plasticity in the central nervous system. Imaging study found that acupuncture increased default mode network connectivity with pain, affective, and memory related brain regions. This modulation may relate to acupuncture analgesia, memory improvement, and other potential therapeutic effects. Developments of molecular biological technology, electrophysiology, and sophisticated imaging technologies have provided insight into the mechanisms of action of acupuncture. A better understanding of acupuncture regulating neuroplasticity is likely to develop strategies to treat various disorders.

We invite investigators to contribute original research articles as well as review articles that will stimulate the continuing efforts to understand the relationship between acupuncture and neuroplasticity. We are particularly interested in articles describing the therapeutic effect of acupuncture on neuroplasticity and new insights into physiological mechanisms of acupuncture using human and animal models.

Potential topics include, but are not limited to:

- ▶ Neuroimaging studies on the interaction between acupuncture and neuroplasticity
- ▶ Effect and mechanisms of acupuncture on neuroplasticity in neurodegenerative diseases
- ▶ Effect and mechanisms of acupuncture on neuroplasticity in acute and chronic pain
- ▶ Effect and mechanisms of acupuncture on neuroplasticity in mood disorders
- ▶ Recent advances in neuroplasticity using acupuncture

Authors can submit their manuscripts via the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/np/atn/>.

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