

Special Issue on

Neuroplasticity and Healthy Lifestyle: How Can We Understand This Relationship?

CALL FOR PAPERS

Our brain has this extraordinary ability to experience both functional and structural changes in response to environmental stimuli, cognitive demands, or our own experience. This property is known as neuroplasticity, which has been one of the main topics in the Neuroscience field in recent years. Among these changes, there are processes such as forming neurons and glial cells, new synaptic connections, axons elongation, and new dendritic spines. Thus, neuroplasticity implies complex mechanisms, involving a wide number of agents needed in order to strengthen brain plasticity.

It is currently known that not only do high-demand cognitive activities (learning a new language, playing a musical instrument, or reading) benefit brain functioning, but also other activities, such as physical activity, have a protective effect over both the cardiovascular and nervous systems. Further, dietary elements like omega 3 appear to positively impact the brain, thus stimulating an improvement of cognitive functions, such as memory.

The term “brain fitness” is becoming popular in our society and is associated with certain lifestyle and activities that promote beneficial effects in the brain, creating a brain reserve which appears to delay age-related neurodegenerative diseases, for example, Parkinson’s disease or Alzheimer’s dementia. These findings suggest that contemporary research should focus on a deeper understanding of neuroplasticity mechanisms and how different activities shape our brain.

We therefore invite authors to contribute their research as well as review articles about neuroplasticity processes, especially related to how our lifestyle can modify this plasticity. Neuroplastic alterations have therapeutic effect on cognitive function like attention, memory, or executive function, after brain damage, ageing, and various mental diseases, and we are also interested in papers that focus on this area.

Potential topics include but are not limited to the following:

- ▶ Molecular/electrophysiological mechanisms involved in neuroplasticity responses
- ▶ Lifestyle, cognitive reserve, and brain reserve
- ▶ Nonpharmacological interventions aiming to reduce stress responses and stimulate resilience
- ▶ Effects of ageing, neurodegenerative diseases, and mental disorders on neuroplasticity
- ▶ Therapeutic use of neuroplasticity
- ▶ Recent advances in neuroplasticity and their application in an educational field

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

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First Round of Reviews

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