



Adaptive Fitness & Wellness Center For Paralysis

## Neuroplasticity

Refers to the ability of the brain to change and adapt in response to experience and learning. It plays an important role in recovery from brain and nervous system injuries, and there are several ways to increase neuroplasticity.

### Ways to Increase Neuroplasticity

1

**Physical Exercise:** Engaging in physical exercise can help increase neuroplasticity by stimulating the growth of new neurons and enhancing the connections between them. Regular exercise has been shown to promote neuroplasticity in various areas of the brain, including the hippocampus and prefrontal cortex.

2

**Cognitive Stimulation:** Engaging in mentally challenging activities can also increase neuroplasticity. Activities such as learning a new language, playing a musical instrument, or solving puzzles can stimulate the brain and promote the growth of new connections between neurons.

3

**Sensory Stimulation:** Exposing the brain to different sensory stimuli can also increase neuroplasticity. Activities such as listening to music, smelling different scents, or experiencing new textures can stimulate the brain and promote the growth of new connections.

4

**Brain-Computer Interfaces:** Brain-computer interfaces (BCIs) are devices that allow people to interact with computers or other devices using their brainwaves. These devices have been shown to promote neuroplasticity by enhancing the connections between neurons in the brain.

5

**Non-Invasive Brain Stimulation:** Non-invasive brain stimulation techniques such as transcranial magnetic stimulation (TMS) and transcranial direct current stimulation (tDCS) have been shown to increase neuroplasticity by modulating the activity of specific regions of the brain.

6

**Mindfulness Meditation:** Mindfulness meditation has been shown to increase neuroplasticity in various areas of the brain, including the prefrontal cortex and the insula. Regular practice of mindfulness meditation can help improve attention, reduce stress, and enhance overall brain function.

Many of the ways to increase neuroplasticity can be used in combination to promote optimal brain function and recovery. The brain's propensity for neuroplasticity allows it to reroute neuronal pathways making it key for those in recovery trying to restore lost abilities.