1. Record Nr. UNINA9910220044603321

Autore	Benedetto Sacchetti
Titolo	Mind-Brain Plasticity and Rehabilitation of Cognitive Functions: What Techniques Have Been Proven Effective?
Pubbl/distr/stampa	Frontiers Media SA, 2017
Descrizione fisica	1 online resource (220 p.)
Collana	Frontiers Research Topics
Soggetti	Neurosciences
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	Rehabilitation of cognitive functions is a primary goal in neurological and psychiatric settings. Cognitive treatments include individual and group exercises, as well as the use of computer programs and virtual reality. Besides, ongoing studies have been examining the clinical usefulness of non-invasive cerebral cortex stimulation in increasing the efficacy of cognitive protocols. Cognitive rehabilitation is based on neuroplasticity and affects brain morphological and physiological responses by integration of behavioral and cognitive changes. The brain correlates of rehabilitation-induced modifications can be investigated through magnetic resonance imaging, both at structural and functional macro-levels. Animal research can integrate such information providing data on axonal regrowth and reshaping of synaptic connectivity in response to treatment. Animal models of neurological and psychiatric conditions have been developed, and preclinical test batteries for the assessment of cognitive functions in animal models of such conditions have been created. The question is then: how does rehabilitation drive reorganization at the neuronal level? The focus of this Research Topic is on rehabilitation-induced cognitive and neural plasticity in adult humans and animal models. The goal is to provide an integrated picture highlighting what techniques have been proven to be effective.