1. Record Nr. UNINA9910383657103321

Titolo	Sleep, Memory and Synaptic Plasticity / / edited by Sushil K. Jha, Vibha M. Jha
Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2019
ISBN	981-13-2814-5
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (263 pages)
Disciplina	612
Soggetti	Human physiology Neurobiology Cell membranes Cell physiology Neuropsychology Human Physiology Membrane Biology Cell Physiology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	The Memory Function of Sleep Across the Lifespan -- Sleep Deprivation, Cognitive Functions and Countermeasures -- Sleep Loss and Neuronal Stress -- The Role of Sleep in Homeostatic Regulation of Ionic Balances and Its Implication in Cognitive Functions -- Sleep and Brain Plasticity -- The Role of Sleep in Emotional Processing -- Sleep, Stress, and Traumatic Memory -- The Distinctive Role of NREM and REM sleep in the Consolidation of Fear Memory -- Sleep and Appetitive Conditioned Memory.
Sommario/riassunto	Over the years there has been growing interest among the scientific community in investigating sleep and how it affects the memory and other brain functions. It is now well established that sleep helps in memory consolidation and induction of neural plasticity, and that short-term deprivation of either total sleep or rapid eye movement sleep alone can induce memory deficits very quickly. Quantitative and qualitative changes in sleep architecture after different training tasks further suggest that discrete memory types may require specific sleep

stage/s for optimal memory consolidation, and studies indicate that sleep deprivation alters synaptic plasticity and membrane excitability in the hippocampal neurons and synaptic up-scaling in the cortical neurons. Further, sleep alteration during pregnancy may increase the risk of depression and adversely affect maternal-child relationships, parenting practices, family functioning, and children's development and general wellbeing. This book coherently discusses all these aspects, with a particular focus on the possible role of sleep in memory consolidation and synaptic plasticity. It also highlights the detrimental effects of sleep loss on mental health, the immune system and cognition. This book is a valuable reference resource for students and researchers working in the area of sleep, memory, or neuronal plasticity.