Foreword

List of Contributors

Basic Biological Investigations on CNS Mechanisms

General

Matching focal and non-focal magnetic coil stimulation to properties of human nervous system: mapping motor unit fields in motor cortex contrasted with altering sequential digit movements by premotor-SMA stimulation  p. 3

Physiological studies of electric and magnetic stimulation of the human brain  p. 29

Topographic maps of human motor cortex in normal and pathological conditions: mirror movements, amputations and spinal cord injuries  p. 36

Mapping of the motor cortex gyral sites noninvasively by transcranial magnetic stimulation in normal subjects and patients  p. 51

Studies of sensory and motor cortex physiology: with observations on akinesia in Parkinson's Disease  p. 76

Responses of the epileptic focus to transcranial magnetic stimulation  p. 86

The firing probability of single motor units following transcranial magnetic stimulation in healthy subjects and patients with neurological disease  p. 100

Magnetic coil stimulation of human visual cortex: studies of perception  p. 111

Magnetic stimuli applied over motor and visual cortex: influence of coil position and field polarity on motor responses, and eye movements  p. 121

Pathways

Cerebellar evoked potentials and motor evoked potentials in the spinal cord of the rat  p. 135

Corticospinal potentials after electrical and magnetic stimulation in man  p. 147

CNS activation patterns underlying motor evoked potentials as demonstrated by C-FOS immunoreactivity  p. 155

Safety

The safety of transcranial magnetic stimulation reconsidered: evidence regarding cognitive and other cerebral effects  p. 170

Repetitive high magnetic field stimulation: the effect upon rat brain  p. 180

Facilitation

Magnetic stimulation of the human motor cortex: ipsilateral and contralateral facilitation effects  p. 186

Motor evoked potentials facilitated by an additional peripheral nerve stimulation  p. 202

Influence of peripheral nerve stimulation on the responses in small hand muscles to transcranial magnetic cortex stimulation  p. 212

Principles of Magnetic Stimulation

Magnetic nerve stimulation: the effect of waveform on efficiency, determination of neural membrane time constants and the measurement of stimulator output  p. 227

Optimizing magnetic stimulator design  p. 238

Magnetic stimulation: technical aspects  p. 249

Guidelines for energy-efficient coils: coils designed for magnetic stimulation of the heart  p. 255

The electric field induced during magnetic stimulation  p. 268

Theoretical and practical performance of magnetic stimulators and coils  p. 279
Spinal Cord Evaluation
The electrophysiological assessment of the pyramidal and non-pyramidal tracts of the spinal cord of rats p. 287
Assessment of functional recovery after spinal cord injury in rats by reticulospinal-mediated motor evoked responses p. 297
Reinforcement of motor evoked potentials in patients with spinal cord injury p. 312
Peripheral Nerve and Roots
Magnetic stimulation of corticonuclear systems and of cranial nerves in man: physiological basis and clinical application p. 333
Mechanisms of peripheral nervous system stimulation using the magnetic coil p. 344
Transcranial magnetic stimulation of the facial nerve: where is the actual excitation site? p. 362
Transcutaneous magnetic and electrical stimulation over the cervical spine: excitation of plexus roots rather than spinal roots? p. 369
Subject index p. 385
Table of Contents provided by Blackwell's Book Services and R.R. Bowker. Used with permission.