

Transcranial Magnetic Stimulation

Selected References (August 2002)

1. General Reviews

Special Volumes:

Neuropsychologia, 1999 Feb, 37(2)

Journal of Clinical Neurophysiology, 1998 Jul, 15(4)

Epilepsy & Behavior, 2001 Jun, v2(n3,Part2)

Cutrer FM; O'Donnell A. Recent advances in functional neuroimaging. *Current Opinion in Neurology*, 1999 Jun, 12(3):255-9.

Hallett M. Transcranial magnetic stimulation and the human brain. *Nature*. 2000 406:147-150.

Pascual-Leone A; Bartres-Faz D; Keenan JP. Transcranial magnetic stimulation: studying the brain-behaviour relationship by induction of 'virtual lesions'. *Philosophical Transactions of the Royal Society of London. Series B: Biological Sciences*, 1999 Jul 29, 354(1387):1229-38.

Stewart, Lauren; Ellison, Amanda; Walsh, Vincent; Cowey, Alan. The Role of Transcranial Magnetic Stimulation (Tms) in Studies of Vision, Attention and Cognition. *Acta Psychologica*, 2001 Apr, v107 (n1-3):275-291.

Walsh V, Cowey A. Transcranial magnetic stimulation and cognitive neuroscience. *Nat Rev Neurosci*. 2000 Oct;1(1):73-9.

Walsh V; Rushworth M. A primer of magnetic stimulation as a tool for neuropsychology. *Neuropsychologia*, 1999 Feb, 37(2):125-35.

Wassermann, Eric M.; Lisanby, Sarah H. Therapeutic application of repetitive transcranial magnetic stimulation: A review. *Clinical Neurophysiology*, 2001 Aug, v112 (n8):1367-1377.

2. Methods and Safety

Chen R; Classen J; Gerloff C; Celnik P; Wassermann EM; Hallett M; Cohen LG. Depression of motor cortex excitability by low-frequency transcranial magnetic stimulation. *Neurology*, 1997 May, 48(5):1398-403.

Chen R; Gerloff C; Classen J; Wassermann EM; Hallett M; Cohen LG. Safety of different inter-train intervals for repetitive transcranial magnetic stimulation and recommendations for safe ranges of stimulation parameters. *Electroencephalography and Clinical Neurophysiology*, 1997 Dec, 105(6):415-21.

Wassermann EM. Risk and safety of repetitive transcranial magnetic stimulation: report and suggested guidelines from the International Workshop on the Safety of Repetitive Transcranial Magnetic Stimulation, June 5-7, 1996. *Electroencephalogr Clin Neurophysiol*. 1998 Jan;108(1):1-16.

3. Physiological basis

Barker, A.T., Jalinous, R., & Freeston, I.L. (1985). Noninvasive magnetic stimulation of human motor cortex. *Lancet*, 2, 11-6-1107.

Brunholzl C, Claus D. Central motor conduction time to upper and lower limbs in cervical cord lesions. *Arch Neurol*. 1994 51:245-9.

Cracco JB; Cracco RQ. The physiological basis of transcranial magnetic stimulation. *Electroencephalography and Clinical Neurophysiology. Supplement*, 1999, 49:217-21.

Merton, P.A. & Morton, H.B. (1980). Stimulation of the cerebral cortex in the intact human subject. *Nature*, 285, 227.

Pascual-Leone A, Tormos JM, Keenan J, Tarazona F, Canete C, Catala MD. Study and modulation of human cortical excitability with transcranial magnetic stimulation. *J Clin Neurophysiol*. 1998 Jul;15(4):333-43.

Paus T; Jech R; Thompson CJ; Comeau R; Peters T; Evans AC. Transcranial magnetic stimulation during positron emission tomography: a new method for studying connectivity of the human cerebral cortex. *Journal of Neuroscience*, 1997 May 1, 17(9):3178-84.

Rothwell JC. Techniques and mechanisms of action of transcranial stimulation of the human motor cortex. *Journal of Neuroscience Methods*, 1997 Jun 27, 74(2):113-22.

Terao Y; Ugawa Y; Sakai K; Miyauchi S; Fukuda H; Sasaki Y; Takino R; Hanajima R; Furubayashi T; Putz B; et al. Localizing the site of magnetic brain stimulation by functional MRI. *Experimental Brain Research*, 1998 Jul, 121(2):145-52.

4. Motor Control

Desmurget M; Epstein CM; Turner RS; Prablanc C; Alexander GE; Grafton ST. Role of the posterior parietal cortex in updating reaching movements to a visual target. *Nat Neurosci*, 1999 2:563-7.

Fadiga L; Buccino G; Craighero L; Fogassi L; Gallese V; Pavesi G. Corticospinal excitability is specifically modulated by motor imagery: a magnetic stimulation study. *Neuropsychologia*, 1999 Feb, 37(2):147-58.

Fadiga L; Fogassi L; Pavesi G; Rizzolatti G. Motor facilitation during action observation: a magnetic stimulation study. *Journal of Neurophysiology*, 1995 Jun, 73(6):2608-11.

Gerloff C; Corwell B; Chen R; Hallett M; Cohen LG. Stimulation over the human supplementary motor area interferes with the organization of future elements in complex motor sequences. *Brain*, 1997 Sep, 120 (Pt 9):1587-602.

Gerloff C; Corwell B; Chen R; Hallett M; Cohen LG. The role of the human motor cortex in the control of complex and simple finger movement sequences. *Brain*, 1998 Sep, 121 (Pt 9):1695-709.

Lemon RN; Johansson RS; Westling G. Corticospinal control during reach, grasp, and precision lift in man. *Journal of Neuroscience*, 1995 Sep, 15(9):6145-56.

Muenchau, A.; Bloem, B. R.; Irlbacher, K.; Trimble, M. R.; and others. Functional connectivity of human premotor and motor cortex explored with repetitive transcranial magnetic stimulation. *Journal of Neuroscience*, 2002 Jan, v22 (n2):554-561.

Rossini PM; Rossi S; Pasqualetti P; Tecchio F. Corticospinal excitability modulation to hand muscles during movement imagery. *Cerebral Cortex*, 1999 Mar, 9(2):161-7.

Schluter ND; Rushworth MF; Passingham RE; Mills KR. Temporary interference in human lateral premotor cortex suggests dominance for the selection of movements. A study using transcranial magnetic stimulation. *Brain*, 1998 May, 121 (Pt 5):785-99.

Sommer, Martin; Classen, Joseph; Cohen, Leonardo G.; Hallett, Mark. Time course of determination of movement direction in the reaction time task in humans. *Journal of Neurophysiology*, 2001 86:1195-1201.

Tergau F; Wanschura V; Canelo M; Wischer S; Wassermann EM; Ziemann U; Paulus W. Complete suppression of voluntary motor drive during the silent period after transcranial magnetic stimulation. *Experimental Brain Research*, 1999 Feb, 124(4):447-54.

van Donkelaar, Paul; Lee, Ji-Hang; Drew, Anthony S. Transcranial magnetic stimulation disrupts eye-hand interactions in the posterior parietal cortex. *Journal of Neurophysiology*, 2000 Sep, v84 (n3):1677-1680.

Verwey, Willem B.; Lammens, Robin; van Honk, Jack. On the role of the SMA in the discrete sequence production task: A TMS study. *Neuropsychologia*, 2002, v40 (n8):1268-1276.

5. Learning/Plasticity

Classen J; Liepert J; Wise SP; Hallett M; Cohen LG. Rapid plasticity of human cortical movement representation induced by practice. *Journal of Neurophysiology*, 1998 Feb, 79(2):1117-23

Liepert J; Terborg C; Weiller C. Motor plasticity induced by synchronized thumb and foot movements. *Experimental Brain Research*, 1999 Apr, 125(4):435-9.

Muellbacher, W., Ziemann, U., Wissel, J., and others, Hallett, M. Early consolidation in human primary motor cortex. *Nature*, 2002, 414: 640-644.

Pascual-Leone A; Grafman J; Hallett M. Modulation of cortical motor output maps during development of implicit and explicit knowledge [see comments], *Science*, 1994, 263L 1287-1289

Pascual-Leone A; Nguyet D; Cohen LG; Brasil-Neto JP; Cammarota A; Hallett M. Modulation of muscle responses evoked by transcranial magnetic stimulation during the acquisition of new fine motor skills. *Journal of Neurophysiology*, 1995 Sep, 74(3):1037-45.

Pascual-Leone A; Tarazona F; Keenan J; Tormos JM; Hamilton R; Catala MD. Transcranial magnetic stimulation and neuroplasticity. *Neuropsychologia*, 1999 Feb, 37(2):207-17

Pascual-Leone A; Wassermann EM; Grafman J; Hallett M. The role of the dorsolateral prefrontal cortex in implicit procedural learning. *Experimental Brain Research*, 1996, 107(3):479-85.

Stefan, Katja; Kunesch, Erwin; Cohen, Leonardo G.; Benecke, Reiner; and others. Induction of plasticity in the human motor cortex by paired associative stimulation. *Brain*, 2000 Mar, v123 (n3):572-584.

Ziemann, U., Muellbacher, W., Hallett, M., Cohen, L.G. Modulation of practice-dependent plasticity in human motor cortex. *Brain*, 2001, 124: 1171-1181.

6. Hemispheric Interactions

Chen R; Gerloff C; Hallett M; Cohen LG. Involvement of the ipsilateral motor cortex in finger movements of different complexities. *Annals of Neurology*, 1997 Feb, 41(2):247-54.

Di Lazzaro V; Oliviero A; Profice P; Insola A; Mazzone P; Tonali P; Rothwell JC. Direct demonstration of interhemispheric inhibition of the human motor cortex produced by transcranial magnetic stimulation. *Experimental Brain Research*, 1999 Feb, 124(4):520-4.

Gerloff C; Cohen LG; Floeter MK; Chen R; Corwell B; Hallett M. Inhibitory influence of the ipsilateral motor cortex on responses to stimulation of the human cortex and pyramidal tract. *Journal of Physiology*, 1998 Jul 1, 510 (Pt 1):249-59.

Kanouchi T; Yokota T; Isa F; Ishii K; Senda M. Role of the ipsilateral motor cortex in mirror movements. *Journal of Neurology, Neurosurgery and Psychiatry*, 1997 Jun, 62(6):629-32.

Marzi CA; Miniussi C; Maravita A; Bertolasi L; Zanette G; Rothwell JC; Sanes JN. Transcranial magnetic stimulation selectively impairs interhemispheric transfer of visuo-motor information in humans. *Experimental Brain Research*, 1998 Feb, 118(3):435-8.

Nakamura H; Kitagawa H; Kawaguchi Y; Tsuji H. Intracortical facilitation and inhibition after transcranial magnetic stimulation in conscious humans. *Journal of Physiology*, 1997 Feb 1, 498 (Pt 3):817-23.

Oliveri M; Rossini PM; Pascualetti P; Traversa R; Cicinelli P; Palmieri MG; Tomaiuolo F; Caltagirone C. Interhemispheric asymmetries in the perception of unimanual and bimanual cutaneous stimuli. A study using transcranial magnetic stimulation. *Brain*, 1999 Sep, 122 (Pt 9):1721-9.

Schnitzler A; Kessler KR; Benecke R. Transcallosally mediated inhibition of interneurons within human primary motor cortex. *Experimental Brain Research*, 1996 Dec, 112(3):381-91.

Wassermann EM; Pascual-Leone A; Hallett M. Cortical motor representation of the ipsilateral hand and arm. *Experimental Brain Research*, 1994, 100(1):121-32.

Ziemann U; Ishii K; Borgheresi A; Yaseen Z; Battaglia F; Hallett M; Cincotta M; Wassermann EM. Dissociation of the pathways mediating ipsilateral and contralateral motor-evoked potentials in human hand and arm muscles. *Journal of Physiology*, 1999 Aug 1, 518 (Pt 3):895-906.

7. Cerebellum

Hashimoto M; Ohtsuka K. Transcranial magnetic stimulation over the posterior cerebellum during visually guided saccades in man. *Brain*, 1995 Oct, 118 (Pt 5):1185-93.

Ohtsuka K; Enoki T. Transcranial magnetic stimulation over the posterior cerebellum during smooth pursuit eye movements in man [see comments]. *Brain*, 1998 Mar, 121 (Pt 3):429-35.

Topka, H; Mescheriakov S; Boose A; Kuntz R; Hertrich I; Seydel L; Dichgans J; Rothwell J. A cerebellar-like terminal and postural tremor induced in normal man by transcranial magnetic stimulation. *Brain*, 1999 Aug, 122 (Pt 8):1551-62.

Werhahn KJ; Taylor J; Ridding M; Meyer BU; Rothwell JC. Effect of transcranial magnetic stimulation over the cerebellum on the excitability of human motor cortex. *Electroencephalography and Clinical Neurophysiology*, 1996 Feb,

8. Eye Movements

Muri RM; Rivaud S; Gaymard B; Ploner CJ; Vermersch AI; Hess CW; Pierrot-Deseilligny C. Role of the prefrontal cortex in the control of express saccades. A transcranial magnetic stimulation study. *Neuropsychologia*, 1999 Feb, 37(2):199-206.

Muri RM; Vermersch AI; Rivaud S; Gaymard B; Pierrot-Deseilligny C. Effects of single-pulse transcranial magnetic stimulation over the prefrontal and posterior parietal cortices during memory-guided saccades in humans. *Journal of Neurophysiology*, 1996 Sep, 76(3):2102-6.

Priori A; Bertolasi L; Rothwell JC; Day BL; Marsden CD. Some saccadic eye movements can be delayed by transcranial magnetic stimulation of the cerebral cortex in man. *Brain*, 1993 Apr, 116 (Pt 2):355-67.

Ro T; Cheifet S; Ingle H; Shoup R; Rafal R. Localization of the human frontal eye fields and motor hand area with transcranial magnetic stimulation and magnetic resonance imaging. *Neuropsychologia*, 1999 Feb, 37(2):225-31.

9. Perception

Amassian VE, Cracco RQ, Maccabee PJ, Cracco JB, Rudell A, Eberle L. Suppression of visual perception by magnetic coil stimulation of human occipital cortex. *Electroencephalogr Clin Neurophysiol*. 1989 74:458-62.

Beckers G; Homberg V. Cerebral visual motion blindness: transitory akinetopsia induced by transcranial magnetic stimulation of human area V5. *Proceedings of the Royal Society of London. Series B: Biological Sciences*, 1992 Aug 22, 249(1325):173-8.

Beckers G; Zeki S. The consequences of inactivating areas V1 and V5 on visual motion perception. *Brain*, 1995 Feb, 118 (Pt 1):49-60.

Corthout E, Uttl B, Ziemann U, Cowey A, Hallett M. Two periods of processing in the (circum)striate visual cortex as revealed by transcranial magnetic stimulation. *Neuropsychologia*. 1999 37:137-45.

Hotson JR; Anand S. The selectivity and timing of motion processing in human temporo-parieto-occipital and occipital cortex: a transcranial magnetic stimulation study. *Neuropsychologia*, 1999 Feb, 37(2):169-79.

Kamitani Y; Shimojo S. Manifestation of scotomas created by transcranial magnetic stimulation of human visual cortex. *Nat Neurosci*, 1999 Aug, 2(8):767-71.

Kammer T. Phosphenes and transient scotomas induced by magnetic stimulation of the occipital lobe: their topographic relationship. *Neuropsychologia*, 1999 Feb, 37(2):191-8.

Kastner S; Demmer I; Ziemann U. Transient visual field defects induced by transcranial magnetic stimulation over human occipital pole. *Experimental Brain Research*, 1998 Jan, 118(1):19-26.

Kosslyn SM; Pascual-Leone A; Felician O; Camposano S; Keenan JP; Thompson WL; Ganis G; Sukel KE; Alpert NM. The role of area 17 in visual imagery: convergent evidence from PET and rTMS [see comments]. *Science*, 1999 Apr 2, 284(5411):167-70.

Paulus W; Korinth S; Wischer S; Tergau F. Differential inhibition of chromatic and achromatic perception by transcranial magnetic stimulation of the human visual cortex. *Neuroreport*, 1999 Apr 26, 10(6):1245-8.

Stewart, Lauren; Meyer, Bernd-Ulrich; Frith, Uta; Rothwell, John. Left posterior BA37 is involved in object recognition: A TMS study. *Neuropsychologia*, 2001, v39 (n1):1-6.

Walsh V; Ashbridge E; Cowey A. Cortical plasticity in perceptual learning demonstrated by transcranial magnetic stimulation. *Neuropsychologia*, 1998 Apr, 36(4):363-7.

Walsh V; Ellison A; Battelli L; Cowey A. Task-specific impairments and enhancements induced by magnetic stimulation of human visual area V5. *Proceedings of the Royal Society of London. Series B: Biological Sciences*, 1998 Mar 22, 265(1395):537-43.

10. Attention

Ashbridge E; Walsh V; Cowey A. Temporal aspects of visual search studied by transcranial magnetic stimulation. *Neuropsychologia*, 1997 Aug, 35(8):1121-31.

Haggard P; Magno E. Localising awareness of action with transcranial magnetic stimulation. *Experimental Brain Research*, 1999 Jul, 127(1):102-7.

Haggard, Patrick; Clark, Sam; Kalogeras, Jeri. Voluntary action and conscious awareness. *Nature Neuroscience*, 2002 Apr, v5 (n4):382-385.

Jahanshahi M; Dirnberger G. The left dorsolateral prefrontal cortex and random generation of responses: studies with transcranial magnetic stimulation. *Neuropsychologia*, 1999 Feb, 37(2):181-90.

Oliveri, M.; Rossini, P. M.; Pascualetti, P.; Traversa, R.; and others. Interhemispheric asymmetries in the perception of unimanual and bimanual cutaneous stimuli. *Brain*, 1999 Sep, v122 (n9):1721-1729.

Oliveri M; Rossini PM; Traversa R; Cicinelli P; Filippi MM; Pascualetti P; Tomaiuolo F; Caltagirone C. Left frontal transcranial magnetic stimulation reduces contralesional extinction in patients with unilateral right brain damage. *Brain*, 1999 Sep, 122 (Pt 9):1731-9.

Pascual-Leone A, Walsh V. Fast backprojections from the motion to the primary visual area necessary for visual awareness. *Science*. 2001 Apr 20;292(5516):510-2.

11. Cognitive Processes

Borojerdi, B., Phipps, M, Kopyleva, L. and others, Grafman, J. Enhancing analogic reasoning with rTMS over the left prefrontal cortex. *Neurology*, 2001, 56: 526-528.

Epstein CM; Meador KJ; Loring DW; Wright RJ; Weissman JD; Sheppard S; Lah JJ; Puhlovich F; Gaitan L; Davey KR. Localization and characterization of speech arrest during transcranial magnetic stimulation. *Clin Neurophysiol*, 1999 Jun, 110(6):1073-9.

Evers, S., Bockermann, I., and Nyhuis, P.W. The impact of transcranial magnetic stimulation on cognitive processing: An event-related potential study. *NeuroReport*, 12: 2915-2918.

Grafman J; Wassermann E. Transcranial magnetic stimulation can measure and modulate learning and memory. *Neuropsychologia*, 1999 Feb, 37(2):159-67. 114.

Hadland, K.A., Rushworth, M.F.S., Passingham, R.E., Jahanshahi, M., and Rothwell, J.C. (2001). Interference with performance of a response selection task that has no working memory component: An rTMS comparison of dorsolateral and medial frontal cortex. *Journal of Cognitive Neuroscience*, 13, 1097-1108.

Hasbroucq T; Kaneko H; Akamatsu M; Possamai CA. Preparatory inhibition of cortico-spinal excitability: a transcranial magnetic stimulation study in man. *Brain Research. Cognitive Brain Research*, 1997 Mar, 5(3):185-92.

Hasbroucq T; Osman A; Possamai CA; Burle B; Carron S; Depy D; Latour S; Mouret I. Cortico-spinal inhibition reflects time but not event preparation: neural mechanisms of preparation dissociated by transcranial magnetic stimulation. *Acta Psychologica*, 1999 Apr, 101(2-3):243-66.

Knecht, S.; Floeel, A.; Draeger, B.; Breitenstein, C.; and others. Degree of language lateralization determines susceptibility to unilateral brain lesions. *Nature Neuroscience*, 2002 Jul, v5 (n7):695-699

Maeda, Fumiko; Kleiner-Fisman, Galit; Pascual-Leone, Alvaro. Motor facilitation while observing hand actions: Specificity of the effect and role of observer's orientation. *Journal of Neurophysiology*, 2002 Mar, v87 (n3):1329-1335.

Mull, Brendan R.; Seyal, Masud. Transcranial magnetic stimulation of left prefrontal cortex impairs working memory. *Clinical Neurophysiology*, 2001 Sep, v112 (n9):1672-1675.

Pascual-Leone A; Valls-Sole J; Wassermann EM; Brasil-Neto J; Cohen LG; Hallett M. Effects of focal transcranial magnetic stimulation on simple reaction time to acoustic, visual and somatosensory stimuli. *Brain*, 1992 Aug, 115 (Pt 4):1045-59.

Rossi, S., Cappa, S.F., Babiloni, C. et al. Prefrontal cortex in long-term memory: an "interference" approach using magnetic stimulation. *Nat Neurosci*. 2001 Sep;4(9):948-52.

Rushworth, M. F. S.; Hadland, K. A.; Paus, T.; Sipila, P. K. Role of the human medial frontal cortex in task switching: A combined fMRI and TMS study. *Journal of Neurophysiology*, 2002 May, v87 (n5):2577-2592.

Sawaki L; Okita T; Fujiwara M; Mizuno K. Specific and non-specific effects of transcranial magnetic stimulation on simple and go/no-go reaction time. *Experimental Brain Research*, 1999 Aug, 127(4):402-8.

Schluter ND; Rushworth MF; Mills KR; Passingham RE. Signal-, set-, and movement-related activity in the human premotor cortex. *Neuropsychologia*, 1999 Feb, 37(2):233-43.

Terao Y; Ugawa Y; Suzuki M; Sakai K; Hanajima R; Gemba-Shimizu K; Kanazawa I. Shortening of simple reaction time by peripheral electrical and submotor-threshold magnetic cortical stimulation. *Experimental Brain Research*, 1997 Jul, 115(3):541-5.

Topper R; Mottaghy FM; Brugmann M; Noth J; Huber W. Facilitation of picture naming by focal transcranial magnetic stimulation of Wernicke's area. *Experimental Brain Research*, 1998 Aug, 121(4):371-8.

12. Affect and Mood

Harmer, C. J.; Thilo, K. V.; Rothwell, J. C.; Goodwin, G. M. Transcranial magnetic stimulation of medial-frontal cortex impairs the processing of angry facial expressions. *Nature Neuroscience*, 2001 Jan, v4 (n1):17-18.

Hoffman, Ralph E.; Boutros, Nashaat. Transcranial magnetic stimulation studies of schizophrenia. *Epilepsy & Behavior*, 2001 Jun, v2 (n3,Part2):S30-S35.

Klein E; Kreinin I; Chistyakov A; Koren D; Mecz L; Marmur S; Ben-Shachar D; Feinsod M. Therapeutic efficacy of right prefrontal slow repetitive transcranial magnetic stimulation in major depression: a double-blind controlled study [see comments]. *Archives of General Psychiatry*, 1999 Apr, 56(4):315-20.

Loo C; Mitchell P; Sachdev P; McDarmont B; Parker G; Gandevia S. Double-blind controlled investigation of transcranial magnetic stimulation for the treatment of resistant major depression. *American Journal of Psychiatry*, 1999 Jun, 156(6):946-8.

Menkes DL; Bodnar P; Ballesteros RA; Swenson MR. Right frontal lobe slow frequency repetitive transcranial magnetic stimulation (SF r-TMS) is an effective treatment for depression: a case-control pilot study of safety and efficacy. *Journal of Neurology, Neurosurgery and Psychiatry*, 1999 Jul, 67(1):113-5.

Pascual-Leone A; Catala MD; Pascual-Leone Pascual A. Lateralized effect of rapid-rate transcranial magnetic stimulation of the prefrontal cortex on mood. *Neurology*, 1996 Feb, 46(2):499-502.

Tormos JM; Canete C; Tarazona F; Catala MD; Pascual-Leone Pascual A; Pascual-Leone A. Lateralized effects of self-induced sadness and happiness on corticospinal excitability. *Neurology*, 1997 Aug, 49(2):487-91.

Triggs WJ; McCoy KJ; Greer R; Rossi F; Bowers D; Kortenkamp S; Nadeau SE; Heilman KM; Goodman WK. Effects of left frontal transcranial magnetic stimulation on depressed mood, cognition, and corticomotor threshold. *Biological Psychiatry*, 1999 Jun 1, 45(11):1440-6.

13. Rehabilitation and Reorganization

Berardelli A; Rona S; Inghilleri M; Manfredi M. Cortical inhibition in Parkinson's disease. A study with paired magnetic stimulation. *Brain*, 1996 Feb, 119 (Pt 1):71-7.

Chen R; Corwell B; Yaseen Z; Hallett M; Cohen LG. Mechanisms of cortical reorganization in lower-limb amputees. *Journal of Neuroscience*, 1998 May 1, 18(9):3443-50.

Cohen LG; Celnik P; Pascual-Leone A; Corwell B; Falz L; Dambrosia J; Honda M; Sadato N; Gerloff C; Catala MD; et al. Functional relevance of cross-modal plasticity in blind humans. *Nature*, 1997 Sep 11, 389(6647):180-3.

Cohen LG; Meer J; Tarkka I; Bierner S; Leiderman DB; Dubinsky RM; Sanes JN; Jabbari B; Branscum B; Hallett M. Congenital mirror movements. Abnormal organization of motor pathways in two patients. *Brain*, 1991 Feb, 114 (Pt 1B):381-403.

Cunnington R; Iansek R; Thickbroom GW; Laing BA; Mastaglia FL; Bradshaw JL; Phillips JG. Effects of magnetic stimulation over supplementary motor area on movement in Parkinson's disease. *Brain*, 1996 Jun, 119 (Pt 3):815-22.

Gothe, Janna; Brandt, Stephan A.; Irlbacher, Kerstin; Roericht, Simone; and others. Changes in visual cortex excitability in blind subjects as demonstrated by transcranial magnetic stimulation. *Brain*, 2002 Mar, v125 (n3):479-490.

Zangaladze, Andro; Epstein, Charles M.; Grafton, Scott T.; Sathian, K. Involvement of visual cortex in tactile discrimination of orientation. *Nature*, 1999 Oct, v401 (n6753):587-590.

Netz J; Lammers T; Homberg V. Reorganization of motor output in the non-affected hemisphere after stroke. *Brain*, 1997 Sep, 120 (Pt 9):1579-86.

Pascual-Leone A; Torres F. Plasticity of the sensorimotor cortex representation of the reading finger in Braille readers. *Brain*, 1993 Feb, 116 (Pt 1):39-52.

Roericht, S.; Meyer, B. -U.; Niehaus, L.; Brandt, S. A. Long-term reorganization of motor cortex outputs after arm amputation. *Neurology*, 1999 Jul, v53 (n1):106-111.

Thickbroom, Gary W.; Byrnes, Michelle L.; Archer, Sarah A.; Nagarajan, Lakshmi; and others. Differences in sensory and motor cortical organization following brain injury early in life. *Annals of Neurology*, 2001 Mar, v49 (n3):320-327.

Wassermann, Eric M. Transcranial magnetic stimulation in disorders of movement: The therapeutic outlook. *Epilepsy & Behavior*, 2001 Jun, v2 (n3,Part2):S41-S44.

Ziemann U; Hallett M; Cohen LG. Mechanisms of deafferentation-induced plasticity in human motor cortex. *Journal of Neuroscience*, 1998 Sep 1, 18(17):7000-7.