

Transcranial Magnetic Stimulation (TMS)

1. Abo M, Kakuda W, Watanabe M, Morooka A, Kawakami K, Senoo A. Effectiveness of low-frequency rTMS and intensive speech therapy in poststroke patients with aphasia: a pilot study based on evaluation by fMRI in relation to type of aphasia. *Eur Neurol* 2012;68:199–208.
2. Abraham WC, Tate WP. Metaplasticity: a new vista across the field of synaptic plasticity. *Prog Neurobiol* 1997;52:303–23.
3. Ackerley SJ, Stinear CM, Barber PA, Byblow WD. Combining theta burst stimulation with training after subcortical stroke. *Stroke* 2010;41:1568–72.
4. Adeyemo BO, Simis M, Macea DD, Fregni F. Systematic review of parameters of stimulation, clinical trial design characteristics, and motor outcomes in non-invasive brain stimulation in stroke. *Front Psychiatry* 2012;3:88.
5. Aguirre I, Carretero B, Ibarra O, Kuhalainen J, Martínez J, Ferrer A, et al. Age predicts low-frequency transcranial magnetic stimulation efficacy in major depression. *J Affect Disord* 2011;130:466–9.
6. Ahdab R, Ayache SS, Brugieres P, Goujon C, Lefaucheur JP. Comparison of “standard” and “navigated” procedures of TMS coil positioning over motor, premotor and prefrontal targets in patients with chronic pain and depression. *Neurophysiol Clin* 2010;40:27–36.
7. Ahdab R, Ayache SS, Farhat WH, Mylius V, Schmidt S, Brugières P, et al. Reappraisal of the anatomical landmarks of motor and premotor cortical regions for image-guided brain navigation in TMS practice. *Hum Brain Mapp* 2014;35:2435–47.
8. Ahmed MA, Mohamed SA, Sayed D. Long-term antalgic effects of repetitive transcranial magnetic stimulation of motor cortex and serum beta-endorphin in patients with phantom pain. *Neurol Res* 2011;33:953–8.
9. Ahmed MA, Darwish ES, Khedr EM, El Serogy YM, Ali AM. Effects of low versus high frequencies of repetitive transcranial magnetic stimulation on cognitive function and cortical excitability in Alzheimer’s dementia. *J Neurol* 2012;259:83–92.
10. Aleman A, Sommer IE, Kahn RS. Efficacy of slow repetitive transcranial magnetic stimulation in the treatment of resistant auditory hallucinations in schizophrenia: a meta-analysis. *J Clin Psychiatry* 2007;68:416–21.
11. Allam N, Brasil-Neto JP, Brandão P, Weiler F, Barros Filho Jd, Tomaz C. Relief of primary cervical dystonia symptoms by low frequency transcranial magnetic stimulation of the premotor cortex: case report. *Arq Neuropsiquiatr* 2007;65:697–9.
12. Alonso P, Pujol J, Cardoner N, Benlloch L, Deus J, Menchon JM, et al. Right prefrontal repetitive transcranial magnetic stimulation in obsessive-compulsive disorder: a double-blind, placebo-controlled study. *Am J Psychiatry* 2001;158:1143–5.
13. Ameli M, Grefkes C, Kemper F, Riegg FP, Rehme AK, Karbe H, et al. Differential effects of high-frequency repetitive transcranial magnetic stimulation over ipsilesional primary motor cortex in cortical and subcortical middle cerebral artery stroke. *Ann Neurol* 2009;66:298–309.
14. Amiaz R, Levy D, Yainiger D, Grunhaus L, Zangen A. Repeated high-frequency transcranial magnetic stimulation over the dorsolateral prefrontal cortex reduces cigarette craving and consumption. *Addiction* 2009;104:653–60.
15. Anders M, Dvorakova J, Rathova L, Havrankova P, Pelcova P, Vaneckova M, et al. Efficacy of repetitive transcranial magnetic stimulation for the treatment of refractory chronic tinnitus: a randomized, placebo controlled study. *Neuro Endocrinol Lett* 2010;31:238–49.

16. Anderson IM, Delvai NA, Ashim B, Ashim S, Lewin C, Singh V, et al. Adjunctive fast repetitive transcranial magnetic stimulation in depression. *Br J Psychiatry* 2007;190:533–4.
17. André-Obadia N, Peyron R, Mertens P, Mauguier F, Laurent B, Garcia-Larrea L. Transcranial magnetic stimulation for pain control. Double-blind study of different frequencies against placebo, and correlation with motor cortex stimulation efficacy. *Clin Neurophysiol* 2006;117:1536–44.
18. André-Obadia N, Mertens P, Gueguen A, Peyron R, Garcia-Larrea L. Pain relief by rTMS: differential effect of current flow but no specific action on pain subtypes. *Neurology* 2008;71:833–40.
19. André-Obadia N, Magnin M, Garcia-Larrea L. On the importance of placebo timing in rTMS studies for pain relief. *Pain* 2011;152:1233–7.
20. André-Obadia N, Mertens P, Lelekov-Boissard T, Afif A, Magnin M, Garcia-Larrea L. Is Life better after motor cortex stimulation for pain control? Results at long-term and their prediction by preoperative rTMS. *Pain Physician* 2014;17:53–62.
21. Angelucci F, Oliviero A, Pilato F, Saturno E, Dileone M, Versace V, et al. Transcranial magnetic stimulation and BDNF plasma levels in amyotrophic lateral sclerosis. *Neuroreport* 2004;15:717–20.
22. Antal A, Kincses TZ, Nitsche MA, Bartfai O, Paulus W. Excitability changes induced in the human primary visual cortex by transcranial direct current stimulation: direct electrophysiological evidence. *Invest Ophthalmol Vis Sci* 2004;45: 702–7.
23. Arai N, Okabe S, Furubayashi T, Terao Y, Yuasa K, Ugawa Y. Comparison between short train, monophasic and biphasic repetitive transcranial magnetic stimulation (rTMS) of the human motor cortex. *Clin Neurophysiol* 2005;116: 605–13.
24. Arai N, Okabe S, Furubayashi T, Mochizuki H, Iwata NK, Hanajima R, et al. Differences in after-effect between monophasic and biphasic high-frequency rTMS of the human motor cortex. *Clin Neurophysiol* 2007;118:2227–33.
25. Arana AB, Borckardt JJ, Ricci R, Anderson B, Li X, Linder KJ, et al. Focal electrical stimulation as a sham control for repetitive transcranial magnetic stimulation: does it truly mimic the cutaneous sensation and pain of active prefrontal repetitive transcranial magnetic stimulation? *Brain Stimul* 2008;1:44–51.
26. Arias P, Vivas J, Grieve KL, Cudeiro J. Controlled trial on the effect of 10 days low- frequency repetitive transcranial magnetic stimulation (rTMS) on motor signs in Parkinson's disease. *Mov Disord* 2010a;25:1830–8.
27. Arias P, Vivas J, Grieve KL, Cudeiro J. Double-blind, randomized, placebo controlled trial on the effect of 10 days low-frequency rTMS over the vertex on sleep in Parkinson's disease. *Sleep Med* 2010b;11:759–65.
28. Arns M, Drinkenburg WH, Fitzgerald PB, Kenemans JL. Neurophysiological predictors of non-response to rTMS in depression. *Brain Stimul* 2012;5:569–76. Attal N, Cruccu G, Haanpaa M, Hansson P, Jensen TS, Nurmikko T, et al. EFNS guidelines on pharmacological treatment of neuropathic pain. *Eur J Neurol* 2006;13:1153–69.
29. 2006;13:1153–69.
30. Avanzino L, Bove M, Tacchino A, Ruggeri P, Giannini A, Trompetto C, et al. Cerebellar involvement in timing accuracy of rhythmic finger movements in essential tremor. *Eur J Neurosci* 2009;30:1971–9.
31. Avenanti A, Coccia M, Ladavas E, Provinciali L, Ceravolo MG. Low-frequency rtms promotes use-dependent motor plasticity in chronic stroke: a randomized trial. *Neurology* 2012;78:256–64.

32. Avery DH, Holtzheimer 3rd PE, Fawaz W, Russo J, Neumaier J, Dunner DL, et al. A controlled study of repetitive transcranial magnetic stimulation in medication-resistant major depression. *Biol Psychiatry* 2006;59:187–94.
33. Awiszus F. TMS and threshold hunting. *Suppl Clin Neurophysiol* 2003;56:13–23.
34. Ayache SS, Farhat WH, Zouari HG, Hosseini H, Mylius V, Lefaucheur JP. Stroke rehabilitation using noninvasive cortical stimulation: motor deficit. *Expert Rev Neurother* 2012;12:949–72.
35. Bae EH, Schrader LM, Machii K, Alonso-Alonso M, Riviello JJ, Pascual-Leone A, et al. Safety and tolerability of repetitive transcranial magnetic stimulation in patients with epilepsy: a review of the literature. *Epilepsy Behav* 2007;10: 521–8.
36. Bae EH, Theodore WH, Fregni F, Cantello R, Pascual-Leone A, Rotenberg A. An estimate of placebo effect of repetitive transcranial magnetic stimulation in epilepsy. *Epilepsy Behav* 2011;20:355–9.
37. Baeken C, Vanderhasselt MA, Remue J, Herremans S, Vanderbruggen N, Zeeuws D, et al. Intensive HF-rTMS treatment in refractory medication-resistant unipolar depressed patients. *J Affect Disord* 2013;151:625–31.
38. Baeken C, Marinazzo D, Wu GR, Van Schuerbeek P, De Mey J, Marchetti I, et al. Accelerated HF-rTMS in treatment-resistant unipolar depression: insights from subgenual anterior cingulate functional connectivity. *World J Biol Psychiatry* 2014;15:286–97.
39. Bajbouj M, Brakemeier EL, Schubert F, Lang UE, Neu P, Schindowski C, et al. Repetitive transcranial magnetic stimulation of the dorsolateral prefrontal cortex and cortical excitability in patients with major depressive disorder. *Exp Neurol* 2005;196:332–8.
40. Barbas H. Connections underlying the synthesis of cognition, memory, and emotion in primate prefrontal cortices. *Brain Res Bull* 2000;52:319–30.
41. Bares M, Kopecek M, Novak T, Stopkova P, Sos P, Kozeny J, et al. Low frequency (1-Hz), right prefrontal repetitive transcranial magnetic stimulation (rTMS) compared with venlafaxine ER in the treatment of resistant depression: a double-blind, single-centre, randomized study. *J Affect Disord* 2009;118: 94–100.
42. Barker A, Freeston I, Jalinous R, Jarrat J. Non invasive magnetic stimulation of the human motor cortex. *Lancet* 1985;2:1106–7.
43. Barker AT. The history and basic principles of magnetic nerve stimulation.
44. *Electroencephalogr Clin Neurophysiol Suppl* 1999;51:3–21.
45. Barr MS, Farzan F, Tran LC, Fitzgerald PB, Daskalakis ZJ. A randomized controlled trial of sequentially bilateral prefrontal cortex repetitive transcranial magnetic stimulation in the treatment of negative symptoms in schizophrenia. *Brain Stimul* 2012;5:337–46.
46. Barth KS, Rydin-Gray S, Kose S, Borckardt JJ, O’Neil PM, Shaw D, et al. Food cravings and the effects of left prefrontal repetitive transcranial magnetic stimulation using an improved sham condition. *Front Psychiatry* 2011;2:1–4.
47. Barwood CH, Murdoch BE, Whelan BM, Lloyd D, Riek S, O’Sullivan J, et al. The effects of low frequency Repetitive Transcranial Magnetic Stimulation (rTMS) and sham condition rTMS on behavioural language in chronic non-fluent aphasia: short term outcomes. *NeuroRehabilitation* 2011a;28:113–28.
48. Barwood CH, Murdoch BE, Whelan BM, Lloyd D, Riek S, O’Sullivan JD, et al. Improved language performance subsequent to low-frequency rTMS in patients with chronic non-fluent aphasia post-stroke. *Eur J Neurol* 2011b;18:935–43.

50. Barwood CH, Murdoch BE, Whelan BM, Lloyd D, Riek S, O'Sullivan JD, et al. Improved receptive and expressive language abilities in nonfluent aphasic stroke patients after application of rTMS: an open protocol case series. *Brain Stimul* 2012;5:274–86.
51. Baudic S, Attal N, Mhalla A, Ciampi de Andrade D, Perrot S, Bouhassira D. Unilateral repetitive transcranial magnetic stimulation of the motor cortex does not affect cognition in patients with fibromyalgia. *J Psychiatr Res* 2013;47:72–7.
52. Bäumer T, Demiralay C, Hidding U, Bikmullina R, Helmich RC, Wunderlich S, et al. Abnormal plasticity of the sensorimotor cortex to slow repetitive transcranial magnetic stimulation in patients with writer's cramp. *Mov Disord* 2007;22:81–90.
53. Bäumer T, Hidding U, Hamel W, Buhmann C, Moll CK, Gerloff C, et al. Effects of DBS, premotor rTMS, and levodopa on motor function and silent period in advanced Parkinson's disease. *Mov Disord* 2009;24:672–6.
54. Bear MF, Kirkwood A. Neocortical long-term potentiation. *Curr Opin Neurobiol* 1993;3:197–202.
55. Bellamoli E, Manganotti P, Schwartz RP, Rimondo C, Gomma M, Serpelloni G. rTMS in the treatment of drug addiction: an update about human studies. *Behav Neurol* 2014;2014:815215.
56. Bench CJ, Frackowiak RS, Dolan RJ. Changes in regional cerebral blood flow on recovery from depression. *Psychol Med* 1995;25:247–61.
57. Benedetti F. No prefrontal control, no placebo response. *Pain* 2010;148:357–8. Benedetti F, Colloca L, Torre E, Lanotte M, Melcarne A, Pesare M, et al. Placebo-responsive Parkinson patients show decreased activity in single neurons of subthalamic nucleus. *Nat Neurosci* 2004;7:587–8.
59. Benedetti F, Mayberg HS, Wager TD, Stohler CS, Zubieta JK. Neurobiological mechanisms of the placebo effect. *J Neurosci* 2005;25:10390–402.
60. Benninger DH. Parkinson's disease. *Handb Clin Neurol* 2013;116:469–83. Benninger DH, Lomarev M, Wassermann EM, Lopez G, Houdayer E, Fasano RE, et al.
61. Safety study of 50 Hz repetitive transcranial magnetic stimulation in patients with Parkinson's disease. *Clin Neurophysiol* 2009;120:809–15.
62. Benninger D, Berman B, Houdayer E, Pal N, Luckenbaugh D, Schneider L, et al. Intermittent theta-burst transcranial magnetic stimulation for treatment of Parkinson disease. *Neurology* 2011;76:601–9.
63. Benninger DH, Iseki K, Kranick S, Luckenbaugh DA, Houdayer E, Hallett M. Controlled study of 50-Hz repetitive transcranial magnetic stimulation for the treatment of Parkinson disease. *Neurorehabil Neural Repair* 2012;26: 1096–105.
64. Bentwich J, Dobronevsky E, Aichenbaum S, Shorer R, Peretz R, Khaigrekht M, et al. Beneficial effect of repetitive transcranial magnetic stimulation combined with cognitive training for the treatment of Alzheimer's disease: a proof of concept study. *J Neural Transm* 2011;118:463–71.
65. Berlim MT, Turecki G. Definition, assessment, and staging of treatment-resistant refractory major depression: a review of current concepts and methods. *Can J Psychiatry* 2007;52:46–54.
66. Berlim MT, Broadbent HJ, Van den Eynde F. Blinding integrity in randomized sham-controlled trials of repetitive transcranial magnetic stimulation for major depression: a systematic review and meta-analysis. *Int J Neuropsychopharmacol* 2013a;16:1173–81.
67. Berlim MT, Neufel NH, Van den Eynde F. Repetitive transcranial magnetic stimulation (rTMS) for obsessive-compulsive disorder (OCD): an exploratory meta-analysis of randomized and sham-controlled trials. *J Psychiatr Res* 2013b;47:999–1006.

68. Berlim MT, Van den Eynde F, Daskalakis ZJ. Clinically meaningful efficacy and acceptability of low-frequency repetitive transcranial magnetic stimulation (rTMS) for treating primary major depression: a meta-analysis of randomized, double-blind and sham-controlled trials. *Neuropsychopharmacology* 2013c;38:543–51.
69. Berlim MT, Van den Eynde F, Daskalakis ZJ. Efficacy and acceptability of high frequency repetitive transcranial magnetic stimulation (rTMS) versus electroconvulsive therapy (ECT) for major depression: a systematic review and meta-analysis of randomized trials. *Depress Anxiety* 2013d;30:614–23.
70. Berlim MT, Van den Eynde F, Daskalakis ZJ. High-frequency repetitive transcranial magnetic stimulation accelerates and enhances the clinical response to antidepressants in major depression: a meta-analysis of randomized, double-blind, and sham-controlled trials. *J Clin Psychiatry* 2013e;74:e122–9.
71. Berlim MT, Van den Eynde F, Daskalakis ZJ. Systematic review and meta-analysis on the efficacy and acceptability of bilateral repetitive transcranial magnetic stimulation (rTMS) for treating major depression. *Psychol Med* 2013f;43:2245–54.
72. Berlim MT, van den Eynde F, Tovar-Perdomo S, Daskalakis ZJ. Response, remission and drop-out rates following high-frequency repetitive transcranial magnetic stimulation (rTMS) for treating major depression: a systematic review and meta-analysis of randomized, double-blind and sham-controlled trials. *Psychol Med* 2014;44:225–39.
73. Berman RM, Narasimhan M, Sanacora G, Miano AP, Hoffman RE, Hu XS, et al. A randomized clinical trial of repetitive transcranial magnetic stimulation in the treatment of major depression. *Biol Psychiatry* 2000;47:332–7.
74. Bestmann S, Baudewig J, Siebner HR, Rothwell JC, Frahm J. BOLD MRI responses to repetitive TMS over human dorsal premotor cortex. *Neuroimage* 2005;28:22–9.
75. Beuter A, Lefaucheur JP, Modolo J. Closed-loop cortical neuromodulation in Parkinson's disease: An alternative to deep brain stimulation? *Clin Neurophysiol* 2014;125:874–85.
76. Bickford RG, Guidi M, Fortesque P, Swenson M. Magnetic stimulation of human peripheral nerve and brain: response enhancement by combined magnetoelectrical technique. *Neurosurgery* 1987;20:110–6.
77. Bienenstock EL, Cooper LN, Munro PW. Theory for the development of neuron selectivity: orientation specificity and binocular interaction in visual cortex. *J Neurosci* 1982;2:32–48.
78. Bilici S, Yigit O, Taskin U, Gor AP, Yilmaz ED. Medium-term results of combined treatment with transcranial magnetic stimulation and antidepressant drug for chronic tinnitus. *Eur Arch Otorhinolaryngol* 2014. <http://dx.doi.org/10.1007/s00405-013-2851-z>. in press.
79. Bliss TV, Lomo T. Long-lasting potentiation of synaptic transmission in the dentate area of the anaesthetized rabbit following stimulation of the perforant path. *J Physiol* 1973;232:331–56.
80. Blumberger DM, Christensen BK, Zipursky RB, Moller B, Chen R, Fitzgerald PB, et al. MRI-targeted repetitive transcranial magnetic stimulation of Heschl's gyrus for refractory auditory hallucinations. *Brain Stimul* 2012a;5:577–85.
81. Blumberger DM, Mulsant BH, Fitzgerald PB, Rajji TK, Ravindran AV, Young LT, et al. A randomized double-blind sham-controlled comparison of unilateral and bilateral repetitive transcranial magnetic stimulation for treatment-resistant major depression. *World J Biol Psychiatry* 2012b;13:423–35.
82. Boggio PS, Fregni F, Bermpohl F, Mansur CG, Rosa M, Rumi DO, et al. Effect of repetitive TMS and fluoxetine on cognitive function in patients with Parkinson's disease and concurrent depression. *Mov Disord* 2005;20:1178–84.

83. Boggio PS, Rocha M, Oliveira MO, Fecteau S, Cohen RB, Campanha C, et al. Noninvasive brain stimulation with high-frequency and low-intensity repetitive transcranial magnetic stimulation treatment for posttraumatic stress disorder. *J Clin Psychiatry* 2010;71:992–9.
84. Bohotin V, Fumal A, Vandenheede M, Gérard P, Bohotin C, Maertens de Noordhout A, et al. Effects of repetitive transcranial magnetic stimulation on visual evoked potentials in migraine. *Brain* 2002;125:912–22.
85. Borckardt JJ, Weinstein M, Reeves ST, Kozel FA, Nahas Z, Smith AR, et al. Postoperative left prefrontal repetitive transcranial magnetic stimulation reduces patient-controlled analgesia use. *Anesthesiology* 2006;105:557–62.
86. Borckardt JJ, Reeves ST, Weinstein M, Smith AR, Shelley N, Kozel FA, et al. Significant analgesic effects of one session of postoperative left prefrontal cortex repetitive transcranial magnetic stimulation: a replication study. *Brain Stimul* 2008;1:122–7.
87. Borckardt JJ, Smith AR, Reeves ST, Madan A, Shelley N, Branham R, et al. A pilot study investigating the effects of fast left prefrontal rTMS on chronic neuropathic pain. *Pain Med* 2009;10:840–9.
88. Borich M, Arora S, Kimberley TJ. Lasting effects of repeated rTMS application in focal hand dystonia. *Restor Neurol Neurosci* 2009;27:55–65.
89. Börnke Ch, Schulte T, Przuntek H, Müller T. Clinical effects of repetitive transcranial magnetic stimulation versus acute levodopa challenge in Parkinson’s disease. *J Neural Transm Suppl* 2004(68):61–7.
90. Bortolomasi M, Minelli A, Fuggetta G, Perini M, Comencini S, Fiaschi A, et al. Long- lasting effects of high frequency repetitive transcranial magnetic stimulation in major depressed patients. *Psychiatry Res* 2007;150:181–6.
91. Bouhassira D, Lanteri-Minet M, Attal N, Laurent B, Touboul C. Prevalence of chronic pain with neuropathic characteristics in the general population. *Pain* 2008;136:380–7.
92. Boutros NN, Gueorguieva R, Hoffman RE, Oren DA, Feingold A, Berman RM. Lack of a therapeutic effect of a 2-week sub-threshold transcranial magnetic stimulation course for treatment-resistant depression. *Psychiatry Res* 2002;113:245–54.
93. Boylan LS, Pullman SL, Lisanby SH, Spicknall KE, Sackeim HA. Repetitive transcranial magnetic stimulation to SMA worsens complex movements in Parkinson’s disease. *Clin Neurophysiol* 2001;112:259–64.
94. Brainin M, Barnes M, Baron JC, Gilhus NE, Hughes R, Selmaj K, et al. Guidance for the preparation of neurological management guidelines by EFNS scientific task forces—revised recommendations 2004. *Eur J Neurol* 2004;11:577–81.
95. Brasil-Neto JP, de Araujo DP, Teixeira WA, Araujo VP, Boechat-Barros R. Experimental therapy of epilepsy with transcranial magnetic stimulation – lack of additional benefit with prolonged treatment. *Arq Neuropsiquiatr* 2004;62:21–5.
96. Bretlau LG, Lunde M, Lindberg L, Unden M, Dissing S, Bech P. Repetitive transcranial magnetic stimulation (rTMS) in combination with escitalopram in patients with treatment-resistant major depression: a double-blind, randomised, sham- controlled trial. *Pharmacopsychiatry* 2008;41:41–7.
97. Brighina F, Piazza A, Daniele O, Fierro B. Modulation of visual cortical excitability in migraine with aura: effects of 1 Hz repetitive transcranial magnetic stimulation. *Exp Brain Res* 2002;145:177–81.
98. Brighina F, Bisiach E, Oliveri M, Piazza A, La Bua V, Daniele O, et al. 1 Hz repetitive transcranial magnetic stimulation of the unaffected hemisphere ameliorates contralesional visuospatial

- neglect in humans. *Neurosci Lett* 2003;336:131–3. Brighina F, Piazza A, Vitello G, Aloisio A, Palermo A, Daniele O, et al. rTMS of the prefrontal cortex in the treatment of chronic migraine: a pilot study. *J Neurol* 99. *Sci* 2004;227:67–71.
100. Brighina F, Giglia G, Scalia S, Francolini M, Palermo A, Fierro B. Facilitatory effects of 1 Hz rTMS in motor cortex of patients affected by migraine with aura. *Exp Brain Res* 2005;161:34–8.
101. Brighina F, Daniele O, Piazza A, Giglia G, Fierro B. Hemispheric cerebellar rTMS to treat drug-resistant epilepsy: case reports. *Neurosci Lett* 2006;397: 229–33.
102. Brighina F, Palermo A, Daniele O, Aloisio A, Fierro B. High-frequency transcranial magnetic stimulation on motor cortex of patients affected by migraine with aura: a way to restore normal cortical excitability? *Cephalalgia* 2010;30: 46–52.
103. Broadbent HJ, van den Eynde F, Guillaume S, Hanif EL, Stahl D, David AS, et al. Blinding success of rTMS applied to the dorsolateral prefrontal cortex in randomised sham-controlled trials: a systematic review. *World J Biol Psychiatry* 2011;12:240–8.
104. Brodbeck V, Thut G, Spinelli L, Romei V, Tyrand R, Michel CM, et al. Effects of repetitive transcranial magnetic stimulation on spike pattern and topography in patients with focal epilepsy. *Brain Topogr* 2010;22:267–80.
105. Brown P. Bad oscillations in Parkinson's disease. *J Neural Transm Suppl* 2006:27–30.
106. Brunelin J, Poulet E, Bediou B, Kallel L, Dalery J, D'Amato T, et al. Low frequency repetitive transcranial magnetic stimulation improves source monitoring deficit in hallucinating patients with schizophrenia. *Schizophr Res* 2006;81:41–5.
107. Brunoni AR, Lopes M, Kaptchuk TJ, Fregni F. Placebo response of non- pharmacological and pharmacological trials in major depression: a systematic review and meta-analysis. *PLoS One* 2009;4:e4824.
108. Brusa L, Versace V, Koch G, Iani C, Stanzione P, Bernardi G, et al. Low frequency rTMS of the SMA transiently ameliorates peak-dose LID in Parkinson's disease. *Clin Neurophysiol* 2006;117:1917–21.
109. Brusa L, Finazzi Agrò E, Petta F, Sciobica F, Torriero S, Lo Gerfo E, et al. Effects of inhibitory rTMS on bladder function in Parkinson's disease patients. *Mov Disord* 2009;24:445–8.
110. Buhmann C, Gorsler A, Baumer T, Hidding U, Demiralay C, Hinkelmann K, et al. Abnormal excitability of premotor-motor connections in de novo Parkinson's disease. *Brain* 2004;127:2732–46.
111. Burger J, Frank E, Kreuzer P, Kleinjung T, Vielsmeier V, Landgrebe M, et al. Transcranial magnetic stimulation for the treatment of tinnitus: 4-year follow-up in treatment responders—a retrospective analysis. *Brain Stimul* 2011;4:222–7.
112. Camprodon JA, Martínez-Raga J, Alonso-Alonso M, Shih MC, Pascual-Leone A. One session of high frequency repetitive transcranial magnetic stimulation (rTMS) to the right prefrontal cortex transiently reduces cocaine craving. *Drug Alcohol Depend* 2007;86:91–4.
113. Cantello R, Rossi S, Varrasi C, Olivelli M, Civardi C, Bartalini S, et al. Slow repetitive TMS for drug-resistant epilepsy: clinical and EEG findings of a placebo- controlled trial. *Epilepsia* 2007;48:366–74.
114. Cardoso EF, Fregni F, Martins Maia F, Boggio PS, Luis Myczkowski M, Coracini K, et al. rTMS treatment for depression in Parkinson's disease increases BOLD responses in the left prefrontal cortex. *Int J Neuropsychopharmacol* 2008;11:173–83.

115. Carretero B, Martin MJ, Juan A, Pradana ML, Martin B, Carral M, et al. Low-frequency transcranial magnetic stimulation in patients with fibromyalgia and major depression. *Pain Med* 2009;10:748–53.
116. Cazzoli D, Müri RM, Schumacher R, von Arx S, Chaves S, Gutbrod K, et al. Theta burst stimulation reduces disability during the activities of daily living in spatial neglect. *Brain* 2012;135:3426–39.
117. Centonze D, Koch G, Versace V, Mori F, Rossi S, Brusa L, et al. Repetitive transcranial magnetic stimulation of the motor cortex ameliorates spasticity in multiple sclerosis. *Neurology* 2007a;68:1045–50.
118. Centonze D, Petta F, Versace V, Rossi S, Torelli F, Prosperetti C, et al. Effects of motor cortex rTMS on lower urinary tract dysfunction in multiple sclerosis. *Mult Scler* 2007b;13:269–71.
119. Chae JH, Nahas Z, Wassermann E, Li X, Sethuraman G, Gilbert D, et al. A pilot safety study of repetitive transcranial magnetic stimulation (rTMS) in Tourette’s syndrome. *Cogn Behav Neurol* 2004;17:109–17.
120. Chang WH, Kim YH, Bang OY, Kim ST, Park YH, Lee PK. Long-term effects of rTMS on motor recovery in patients after subacute stroke. *J Rehabil Med* 2010;42: 758–64.
121. Chang WH, Kim YH, Yoo WK, Goo KH, Park CH, Kim ST, et al. rTMS with motor training modulates cortico-basal ganglia-thalamocortical circuits in stroke patients. *Restor Neurol Neurosci* 2012;30:179–89.
122. Chastan N, Parain D. Psychogenic paralysis and recovery after motor cortex transcranial magnetic stimulation. *Mov Disord* 2010;25:1501–4.
123. Chen J, Zhou C, Wu B, Wang Y, Li Q, Wei Y, et al. Left versus right repetitive transcranial magnetic stimulation in treating major depression: a meta-analysis of randomised controlled trials. *Psychiatry Res* 2013;210:1260–4.
124. Chen R, Classen J, Gerloff C, Celnik P, Wassermann EM, Hallett M, et al. Depression of motor cortex excitability by low-frequency transcranial magnetic stimulation. *Neurology* 1997;48:1398–403.
125. Chen R, Cros D, Curra A, Di Lazzaro V, Lefaucheur JP, Magistris MR, et al. The clinical diagnostic utility of transcranial magnetic stimulation: report of an IFCN committee. *Clin Neurophysiol* 2008;119:504–32.
126. Chistyakov AV, Kaplan B, Rubichek O, Kreinin I, Koren D, Feinsod M, et al. Antidepressant effects of different schedules of repetitive transcranial magnetic stimulation vs. clomipramine in patients with major depression: relationship to changes in cortical excitability. *Int J Neuropsychopharmacol* 2005;8:223–33.
127. Chuang WL, Huang YZ, Lu CS, Chen RS. Reduced cortical plasticity and GABAergic modulation in essential tremor. *Mov Disord* 2014;29:501–7.
128. Chung HK, Tsai CH, Lin YC, Chen JM, Tsou YA, Wang CY, et al. Effectiveness of theta-burst repetitive transcranial magnetic stimulation for treating chronic tinnitus. *Audiol Neurotol* 2012;17:112–20.
129. Cincotta M, Borgheresi A, Gambetti C, Balestrieri F, Rossi L, Zaccara G, et al. Suprathreshold 0.3 Hz repetitive TMS prolongs the cortical silent period: potential implications for therapeutic trials in epilepsy. *Clin Neurophysiol* 2003;114:1827–33.
130. Cohen H, Kaplan Z, Kotler M, Kouperman I, Moisa R, Grisaru N. Repetitive transcranial magnetic stimulation of the right dorsolateral prefrontal cortex in posttraumatic stress disorder: a double-blind, placebo-controlled study. *Am J Psychiatry* 2004;161:515–24.

131. Colebatch JG, Findley LJ, Frackowiak RS, Marsden CD, Brooks DJ. Preliminary report: activation of the cerebellum in essential tremor. *Lancet* 1990;336:1028–30.
132. Colloca L, Benedetti F. How prior experience shapes placebo analgesia. *Pain* 2006;124:126–33.
133. Conca A, Di Pauli J, Beraus W, Hausmann A, Peschina W, Schneider H, et al. Combining high and low frequencies in rTMS antidepressive treatment: preliminary results. *Hum Psychopharmacol* 2002;17:353–6.
134. Conforto AB, Anjos SM, Saposnik G, Mello EA, Nagaya EM, Santos Jr W, et al. Transcranial magnetic stimulation in mild to severe hemiparesis early after stroke: a proof of principle and novel approach to improve motor function. *J Neurol* 2012;259:1399–405.
135. Conforto AB, Amaro Jr E, Gonçalves AL, Mercante JP, Guendler VZ, Ferreira JR, et al. Randomized, proof-of-principle clinical trial of active transcranial magnetic stimulation in chronic migraine. *Cephalalgia* 2014;34:464–72.
136. Conte A, Barbanti P, Frasca V, Iacovelli E, Gabriele M, Giacomelli E, et al. Differences in short-term primary motor cortex synaptic potentiation as assessed by repetitive transcranial magnetic stimulation in migraine patients with and without aura. *Pain* 2010;148:43–8.
137. Cooke SF, Bliss TV. Plasticity in the human central nervous system. *Brain* 2006;129:1659–73.
138. Cordes J, Thunker J, Agelink MW, Arends M, Mobascher A, Wobrock T, et al. Effects of 10 Hz repetitive transcranial magnetic stimulation (rTMS) on clinical global impression in chronic schizophrenia. *Psychiatry Res* 2010;177:32–6.
139. Cotelli M, Manenti R, Cappa SF, Geroldi C, Zanetti O, Rossini PM, et al. Effect of transcranial magnetic stimulation on action naming in patients with Alzheimer disease. *Arch Neurol* 2006;63:1602–4.
140. Cotelli M, Manenti R, Cappa SF, Zanetti O, Miniussi C. Transcranial magnetic stimulation improves naming in Alzheimer disease patients at different stages of cognitive decline. *Eur J Neurol* 2008;15:1286–92.
141. Cotelli M, Calabria M, Manenti R, Rosini S, Zanetti O, Cappa SF, et al. Improved language performance in Alzheimer disease following brain stimulation. *J Neurol Neurosurg Psychiatry* 2011a;82:794–7.
142. Cotelli M, Fertoni A, Miozzo A, Rosini S, Manenti R, Padovani A, et al. Anomia training and brain stimulation in chronic aphasia. *Neuropsychol Rehabil* 2011b;21:717–41.
143. Couturier JL. Efficacy of rapid-rate repetitive transcranial magnetic stimulation in the treatment of depression: a systematic review and meta-analysis. *J Psychiatry Neurosci* 2005;30:83–90.
144. Croarkin PE, Wall CA, McClintock SM, Kozel FA, Husain MM, Sampson SM. The emerging role for repetitive transcranial magnetic stimulation in optimizing the treatment of adolescent depression. *J ECT* 2010;26:323–9.
145. Crosson B, McGregor K, Gopinath KS, Conway TW, Benjamin M, Chang YL, et al. Functional MRI of language in aphasia: a review of the literature and the methodological challenges. *Neuropsychol Rev* 2007;17:157–77.
146. Cruccu G, Aziz T, Garcia-Larrea L, Hansson P, Jensen T, Lefaucheur J, et al. EFNS guidelines on neurostimulation therapy for neuropathic pain. *Eur J Neurol* 2007;14:952–70.
147. Dafotakis M, Grefkes C, Eickhoff SB, Karbe H, Fink GR, Nowak DA. Effects of rTMS on grip force control following subcortical stroke. *Exp Neurol* 2008;211:407–12.

148. Dammekens E, Vanneste S, Ost J, De Ridder D. Neural correlates of high frequency repetitive transcranial magnetic stimulation improvement in post-stroke non- fluent aphasia: a case study. *Neurocase* 2014;20:1–9.
149. Daniele O, Brighina F, Piazza A, Giglia G, Scalia S, Fierro B. Low-frequency transcranial magnetic stimulation in patients with cortical dysplasia – a preliminary study. *J Neurol* 2003;250:761–2.
150. Daskalakis ZJ, Möller B, Christensen BK, Fitzgerald PB, Gunraj C, Chen R. The effects of repetitive transcranial magnetic stimulation on cortical inhibition in healthy human subjects. *Exp Brain Res* 2006;174:403–12.
151. de Andrade DC, Mhalla A, Adam F, Texeira MJ, Bouhassira D. Neuropharmacological basis of rTMS-induced analgesia: the role of endogenous opioids. *Pain* 2011;152:320–6.
152. de Groot M, Hermann W, Steffen J, Wagner A, Grahmann F. (Contralateral and ipsilateral repetitive transcranial magnetic stimulation in Parkinson patients). *Nervenarzt* 2001;72:932–8.
153. De Ridder D. Should rTMS for tinnitus be performed left-sided, ipsilaterally or contralaterally, and is it a treatment or merely investigational? *Eur J Neurol* 2010;17:891–2.
154. De Ridder D, Verstraeten E, Van der Kelen K, De Mulder G, Sunaert S, Verlooy J, et al. Transcranial magnetic stimulation for tinnitus: influence of tinnitus duration on stimulation parameter choice and maximal tinnitus suppression. *Otol Neurotol* 2005;26:616–9.
155. De Ridder D, De Mulder G, Verstraeten E, Seidman M, Elisevich K, Sunaert S, et al. Auditory cortex stimulation for tinnitus. *Acta Neurochir Suppl* 2007a;97:451–62.
156. De Ridder D, van der Loo E, Van der Kelen K, Menovsky T, van de Heyning P, Moller A. Theta, alpha and beta burst transcranial magnetic stimulation: brain modulation in tinnitus. *Int J Med Sci* 2007b;4:237–41.
157. De Ridder D, Elgoyhen AB, Romo R, Langguth B. Phantom percepts: tinnitus and pain as persisting aversive memory networks. *Proc Natl Acad Sci USA* 2011a;108:8075–80.
158. De Ridder D, Vanneste S, Kovacs S, Sunaert S, Menovsky T, van de Heyning P, et al. Transcranial magnetic stimulation and extradural electrodes implanted on secondary auditory cortex for tinnitus suppression. *J Neurosurg* 2011b;114: 903–11.
159. De Ridder D, Song JJ, Vanneste S. Frontal cortex TMS for tinnitus. *Brain Stimul* 2013;6:355–62.
160. de Weijer AD, Meijering AL, Bloemendaal M, Neggers SFW, Daalman K, Sommer IEC, et al. High frequency rTMS, a more effective treatment for auditory verbal hallucinations? *Psychiatry Res* 2014. in press..
161. Defrin R, Grunhaus L, Zamir D, Zeilig G. The effect of a series of repetitive transcranial magnetic stimulations of the motor cortex on central pain after spinal cord injury. *Arch Phys Med Rehabil* 2007;88:1574–80.
162. Degardin A, Devos D, Defebvre L, Destée A, Plomhause L, Derambure P, et al. Effect of intermittent theta-burst stimulation on akinesia and sensorimotor integration in patients with Parkinson's disease. *Eur J Neurosci* 2012;36:2669–78.
163. Del Olmo MF, Bello O, Cudeiro J. Transcranial magnetic stimulation over dorsolateral prefrontal cortex in Parkinson's disease. *Clin Neurophysiol* 2007;118:131–9.
164. Dell'osso B, Camuri G, Castellano F, Vecchi V, Benedetti M, Bortolussi S, et al. Meta-review of metanalytic studies with repetitive transcranial magnetic stimulation (rTMS) for the treatment of major depression. *Clin Pract Epidemiol Ment Health* 2011;7:167–77.

165. Demeulemeester M, Amad A, Bubrovsky M, Pins D, Thomas P, Jardri R. What is the real effect of 1-Hz repetitive transcranial magnetic stimulation on hallucinations? Controlling for publication bias in neuromodulation trials. *Biol Psychiatry* 2012;71:e15–6.
166. Deng ZD, Peterchev AV, Lisanby SH. Coil design considerations for deep-brain transcranial magnetic stimulation (dTMS). *Conf Proc IEEE Eng Med Biol Soc* 2008;2008:5675–9.
167. Di Lazzaro V, Oliviero A, Profice P, Saturno E, Pilato F, Insola A, et al. Comparison of descending volleys evoked by transcranial magnetic and electric stimulation in conscious humans. *Electroencephalogr Clin Neurophysiol* 1998;109:397–401.
168. Di Lazzaro V, Oliviero A, Saturno E, Pilato F, Insola A, Mazzone P, et al. The effect on corticospinal volleys of reversing the direction of current induced in the motor cortex by transcranial magnetic stimulation. *Exp Brain Res* 2001;138:268–73.
169. Di Lazzaro V, Oliviero A, Pilato F, Mazzone P, Insola A, Ranieri F, et al. Corticospinal volleys evoked by transcranial stimulation of the brain in conscious humans. *Neurol Res* 2003;25:143–50.
170. Di Lazzaro V, Oliviero A, Pilato F, Saturno E, Dileone M, Mazzone P, et al. The physiological basis of transcranial motor cortex stimulation in conscious humans. *Clin Neurophysiol* 2004a;115:255–66.
171. Di Lazzaro V, Oliviero A, Saturno E, Pilato F, Dileone M, Sabatelli M, et al. Motor cortex stimulation for amyotrophic lateral sclerosis: time for a therapeutic trial? *Clin Neurophysiol* 2004b;115:1479–85.
172. Di Lazzaro V, Pilato F, Saturno E, Oliviero A, Dileone M, Mazzone P, et al. Theta-burst repetitive transcranial magnetic stimulation suppresses specific excitatory circuits in the human motor cortex. *J Physiol* 2005;565:945–50.
173. Di Lazzaro V, Dileone M, Pilato F, Profice P, Ranieri F, Musumeci G, et al. Repetitive transcranial magnetic stimulation for ALS: a preliminary controlled study. *Neurosci Lett* 2006;408:135–40.
174. Di Lazzaro V, Pilato F, Dileone M, Profice P, Oliviero A, Mazzone P, et al. Low-frequency repetitive transcranial magnetic stimulation suppresses specific excitatory circuits in the human motor cortex. *J Physiol* 2008a;586:4481–7.
175. Di Lazzaro V, Ziemann U, Lemon RN. State of the art: physiology of transcranial motor cortex stimulation. *Brain Stimul* 2008b;1:345–62.
176. Di Lazzaro V, Pilato F, Profice P, Ranieri F, Musumeci G, Florio L, et al. Motor cortex stimulation for ALS: a double blind placebo-controlled study. *Neurosci Lett* 2009;464:18–21.
177. Di Lazzaro V, Profice P, Pilato F, Dileone M, Oliviero A, Ziemann U. The effects of motor cortex rTMS on corticospinal descending activity. *Clin Neurophysiol* 2010;121:464–73.
178. Di Lazzaro V, Dileone M, Pilato F, Capone F, Musumeci G, Ranieri F, et al. Modulation of motor cortex neuronal networks by rTMS: comparison of local and remote effects of six different protocols of stimulation. *J Neurophysiol* 2011;105:2150–6.
179. Dias AE, Barbosa ER, Coracini K, Maia F, Marcolin MA, Fregni F. Effects of repetitive transcranial magnetic stimulation on voice and speech in Parkinson's disease. *Acta Neurol Scand* 2006;113:92–9.
180. Diego MA, Field T, Hernandez-Reif M. CES-D depression scores are correlated with frontal EEG alpha asymmetry. *Depress Anxiety* 2001;13:32–7.
181. Dlabac-de Lange JJ, Knegtering R, Aleman A. Repetitive transcranial magnetic stimulation for negative symptoms of schizophrenia: review and meta-analysis. *J Clin Psych* 2010;71:411–8.

182. Dragasevic N, Potrebic' A, Damjanovic' A, Stefanova E, Kostic' VS. Therapeutic efficacy of bilateral prefrontal slow repetitive transcranial magnetic stimulation in depressed patients with Parkinson's disease: an open study. *Mov Disord* 2002;17:528–32.
183. Edwards MJ, Talelli P, Rothwell JC. Clinical applications of transcranial magnetic stimulation in patients with movement disorders. *Lancet Neurol* 2008;7: 827–40.
184. Edwardson MA, Lucas TH, Carey JR, Fetz EE. New modalities of brain stimulation for stroke rehabilitation. *Exp Brain Res* 2013;224:335–58.
185. Eggermont JJ. Tinnitus: neurobiological substrates. *Drug Discov Today* 2005;10: 1283–90.
186. Eggermont JJ. Pathophysiology of tinnitus. *Prog Brain Res* 2007;166:19–35.
187. Eichhammer P, Johann M, Kharraz A, Binder H, Pittrow M, Wodarz N, et al. High-frequency repetitive transcranial magnetic stimulation decreases cigarette smoking. *J Clin Psychiatry* 2003;64:951–3.
188. Eichhammer P, Kleinjung T, Landgrebe M, Hajak G, Langguth B. TMS for treatment of chronic tinnitus: neurobiological effects. *Prog Brain Res* 2007;166:369–75.
189. Elahi B, Elahi B, Chen R. Effect of transcranial magnetic stimulation on Parkinson motor function—systematic review of controlled clinical trials. *Mov Disord* 2009;24:357–63.
190. Eliasova I, Mekyska J, Kostalova M, Marecek R, Smekal Z, Rektorova I. Acoustic evaluation of short-term effects of repetitive transcranial magnetic stimulation on motor aspects of speech in Parkinson's disease. *J Neural Transm* 2013;120:597–605.
191. Ellis P. The essential guide to effect sizes: an introduction to statistical power, meta-analysis and the interpretation of research results. Cambridge: University Press; 2010.
192. Ellison A, Schindler I, Pattison LL, Milner AD. An exploration of the role of the superior temporal gyrus in visual search and spatial perception using TMS. *Brain* 2004;127:2307–15.
193. Emara T, El Nahas N, Elkader HA, Ashour S, El Etrebi A. MRI can predict the response to therapeutic repetitive transcranial magnetic stimulation (rTMS) in stroke patients. *J Vasc Interv Neurol* 2009;2:163–8.
194. Emara TH, Moustafa RR, Elnahas NM, Elganzoury AM, Abdo TA, Mohamed SA, et al. Repetitive transcranial magnetic stimulation at 1 Hz and 5 Hz produces sustained improvement in motor function and disability after ischaemic stroke. *Eur J Neurol* 2010;17:1203–9.
195. Epstein CM, Evatt ML, Funk A, Girard-Siqueira L, Lupei N, Slaughter L, et al. An open study of repetitive transcranial magnetic stimulation in treatment-resistant depression with Parkinson's disease. *Clin Neurophysiol* 2007;118:2189–94.
196. Eranti S, Mogg A, Pluck G, Landau S, Purvis R, Brown RG, et al. A randomized, controlled trial with 6-month follow-up of repetitive transcranial magnetic stimulation and electroconvulsive therapy for severe depression. *Am J Psychiatry* 2007;164:73–81.
197. Eschweiler GW, Wegerer C, Schlotter W, Spandl C, Stevens A, Bartels M, et al. Left prefrontal activation predicts therapeutic effects of repetitive transcranial magnetic stimulation (rTMS) in major depression. *Psychiatry Res* 2000;99: 161–72.
198. Esser SK, Hill SL, Tononi G. Modeling the effects of transcranial magnetic stimulation on cortical circuits. *J Neurophysiol* 2005;94:622–39.
199. Etoh S, Noma T, Ikeda K, Jonoshita Y, Ogata A, Matsumoto S, et al. Effects of repetitive transcranial magnetic stimulation on repetitive facilitation exercises of the hemiplegic hand in chronic stroke patients. *J Rehabil Med* 2013;45:843–7.

200. Fang J, Zhou M, Yang M, Zhu C, He L. Repetitive transcranial magnetic stimulation for the treatment of amyotrophic lateral sclerosis or motor neuron disease. *Cochrane Database Syst Rev* 2013;5:CD008554.
201. Fant RV, Buchhalter AL, Buchman AC, Henningfield JE. Pharmacotherapy for tobacco dependence. *Handb Exp Pharmacol* 2009(192):487–510.
202. Fava M. The role of the serotonergic and noradrenergic neurotransmitter systems in the treatment of psychological and physical symptoms of depression. *J Clin Psychiatry* 2003;64:26–9.
203. Ferbert A, Priori A, Rothwell JC, Day BL, Colebatch JG, Marsden CD. Interhemispheric inhibition of the human motor cortex. *J Physiol* 1992;453:525–46.
204. Fierro B, Ricci R, Piazza A, Scalia S, Giglia G, Vitello G, et al. 1 Hz rTMS enhances extrastriate cortex activity in migraine: evidence of a reduced inhibition? *Neurology* 2003;61:1446–8.
205. Filipovic' SR, Rothwell JC, van de Warrenburg BP, Bhatia K. Repetitive transcranial magnetic stimulation for levodopa-induced dyskinesias in Parkinson's disease. *Mov Disord* 2009;24:246–53.
206. Filipovic' SR, Rothwell JC, Bhatia K. Slow (1 Hz) repetitive transcranial magnetic stimulation (rTMS) induces a sustained change in cortical excitability in patients with Parkinson's disease. *Clin Neurophysiol* 2010a;121:1129–37.
207. Filipovic' SR, Rothwell JC, Bhatia K. Low-frequency repetitive transcranial magnetic stimulation and off-phase motor symptoms in Parkinson's disease. *J Neurol Sci* 2010b;291:1–4.
208. Filipovic' SR, Bhatia KP, Rothwell JC. 1-Hz repetitive transcranial magnetic stimulation and diphasic dyskinesia in Parkinson's disease. *Mov Disord* 2013;28:245–6.
209. Fitzgerald PB, Daskalakis ZJ. The effects of repetitive transcranial magnetic stimulation in the treatment of depression. *Expert Rev Med Devices* 2011;8:85–95.
210. Fitzgerald PB, Daskalakis ZJ. A practical guide to the use of repetitive transcranial magnetic stimulation in the treatment of depression. *Brain Stimul* 2012;5:287–96. Fitzgerald PB, Brown TL, Marston NA, Daskalakis ZJ, De Castella A, Kulkarni J. Transcranial magnetic stimulation in the treatment of depression: a double-blind, placebo-controlled trial. *Arch Gen Psychiatry* 2003;60:1002–8.
211. Fitzgerald PB, Benitez J, Daskalakis JZ, Brown TL, Marston NA, de Castella A, et al. A double-blind sham-controlled trial of repetitive transcranial magnetic stimulation in the treatment of refractory auditory hallucinations. *J Clin Psychopharmacol* 2005;25:358–62.
212. Fitzgerald PB, Benitez J, de Castella A, Daskalakis ZJ, Brown TL, Kulkarni J. A randomized, controlled trial of sequential bilateral repetitive transcranial magnetic stimulation for treatment-resistant depression. *Am J Psychiatry* 2006;163:88–94.
213. Fitzgerald PB, Sritharan A, Daskalakis ZJ, de Castella AR, Kulkarni J, Egan G. A functional magnetic resonance imaging study of the effects of low frequency right prefrontal transcranial magnetic stimulation in depression. *J Clin Psychopharmacol* 2007;27:488–92.
214. Fitzgerald PB, Herring S, Hoy K, McQueen S, Segrave R, Kulkarni J, et al. A study of the effectiveness of bilateral transcranial magnetic stimulation in the treatment of the negative symptoms of schizophrenia. *Brain Stimul* 2008a;1:27–32.

216. Fitzgerald PB, Hoy K, McQueen S, Herring S, Segrave R, Been G, et al. Priming stimulation enhances the effectiveness of low-frequency right prefrontal cortex transcranial magnetic stimulation in major depression. *J Clin Psychopharmacol* 2008b;28:52–8.
217. Fitzgerald PB, Hoy K, Daskalakis ZJ, Kulkarni J. A randomized trial of the anti-depressant effects of low- and high-frequency transcranial magnetic stimulation in treatment-resistant depression. *Depress Anxiety* 2009a;26:229–34.
218. Fitzgerald PB, Hoy K, McQueen S, Maller JJ, Herring S, Segrave R, et al. A randomized trial of rTMS targeted with MRI based neuro-navigation in treatment-resistant depression. *Neuropsychopharmacology* 2009b;34:1255–62.
219. Fitzgerald PB, McQueen S, Herring S, Hoy K, Segrave R, Kulkarni J, et al. A study of the effectiveness of high-frequency left prefrontal cortex transcranial magnetic stimulation in major depression in patients who have not responded to right-sided stimulation. *Psychiatry Res* 2009c;169:12–5.
220. Fitzgerald PB, Hoy K, Gunewardene R, Slack C, Ibrahim S, Bailey M, et al. A randomized trial of unilateral and bilateral prefrontal cortex transcranial magnetic stimulation in treatment-resistant major depression. *Psychol Med* 2011;41:1187–96.
221. Fitzgerald PB, Hoy KE, Herring SE, McQueen S, Peachey AV, Segrave RA, et al. A double blind randomized trial of unilateral left and bilateral prefrontal cortex transcranial magnetic stimulation in treatment resistant major depression. *J Affect Disord* 2012;139:193–8.
222. Fitzgerald PB, Grace N, Hoy KE, Bailey M, Daskalakis ZJ. An open label trial of clustered maintenance rTMS for patients with refractory depression. *Brain Stimul* 2013a;6:292–7.
223. Fitzgerald PB, Hoy KE, Singh A, Gunewardene R, Slack C, Ibrahim S, et al. Equivalent beneficial effects of unilateral and bilateral prefrontal cortex transcranial magnetic stimulation in a large randomized trial in treatment-resistant major depression. *Int J Neuropsychopharmacol* 2013b;16:1975–84.
224. Floel A, Hummel F, Duque J, Knecht S, Cohen LG. Influence of somatosensory input on interhemispheric interactions in patients with chronic stroke. *Neurorehabil Neural Repair* 2008;22:477–85.
225. Folmer RL, Carroll JR, Rahim A, Shi Y, Hal Martin W. Effects of repetitive transcranial magnetic stimulation (rTMS) on chronic tinnitus. *Acta Otolaryngol Suppl* 2006:96–101.
226. Forogh B, Yazdi-Bahri SM, Ahadi T, Fereshtehnejad SM, Raissi GR. Comparison of two protocols of transcranial magnetic stimulation for treatment of chronic tinnitus: a randomized controlled clinical trial of burst repetitive versus high-frequency repetitive transcranial magnetic stimulation. *Neurol Sci* 2014;35:227–32.
227. Fox MD, Buckner RL, White MP, Greicius MD, Pascual-Leone A. Efficacy of transcranial magnetic stimulation targets for depression is related to intrinsic functional connectivity with the subgenual cingulate. *Biol Psychiatry* 2012;72:595–603.
228. Fox P, Ingham R, George MS, Mayberg H, Ingham J, Roby J, et al. Imaging human intracerebral connectivity by PET during TMS. *Neuroreport* 1997;8:2787–91.
229. Fox PT, Narayana S, Tandon N, Sandoval H, Fox SP, Kochunov P, et al. Column-based model of electric field excitation of cerebral cortex. *Hum Brain Mapp* 2004;22:1–14.
230. Frank E, Eichhammer P, Burger J, Zowe M, Landgrebe M, Hajak G, et al. Transcranial magnetic stimulation for the treatment of depression: feasibility and results under naturalistic conditions: a retrospective analysis. *Eur Arch Psychiatry Clin Neurosci* 2011;261:261–6.

231. Frank G, Kleinjung T, Landgrebe M, Vielsmeier V, Steffenhagen C, Burger J, et al. Left temporal low-frequency rTMS for the treatment of tinnitus: clinical predictors of treatment outcome-a retrospective study. *Eur J Neurol* 2010;17:951–6.
232. Fregni F, Santos CM, Myczkowski ML, Rigolino R, Gallucci-Neto J, Barbosa ER, et al. Repetitive transcranial magnetic stimulation is as effective as fluoxetine in the treatment of depression in patients with Parkinson’s disease. *J Neurol Neurosurg Psychiatry* 2004;75:1171–4.
233. Fregni F, DaSilva D, Potvin K, Ramos-Estebanez C, Cohen D, Pascual-Leone A, et al. Treatment of chronic visceral pain with brain stimulation. *Ann Neurol* 2005a;58:971–2.
234. Fregni F, Thome-Souza S, Bermanpohl F, Marcolin MA, Herzog A, Pascual-Leone A, et al. Antiepileptic effects of repetitive transcranial magnetic stimulation in patients with cortical malformations: an EEG and clinical study. *Stereotact Funct Neurosurg* 2005b;83:57–62.
235. Fregni F, Boggio PS, Valle AC, Rocha RR, Duarte J, Ferreira MJ, et al. A sham- controlled trial of a 5-day course of repetitive transcranial magnetic stimulation of the unaffected hemisphere in stroke patients. *Stroke* 2006a;37: 2115–22.
236. Fregni F, Ono CR, Santos CM, Bermanpohl F, Buchpiguel C, Barbosa ER, et al. Effects of antidepressant treatment with rTMS and fluoxetine on brain perfusion in PD. *Neurology* 2006b;66:1629–37.
237. Fregni F, Otachi PTM, do Valle A, Boggio PS, Thut G, Rigonatti SP, et al. A randomized clinical trial of repetitive transcranial magnetic stimulation in patients with refractory epilepsy. *Ann Neurol* 2006c;60:447–55.
238. Fregni F, Potvin K, Dasilva D, Wang X, Lenkinski RE, Freedman SD, et al. Clinical effects and brain metabolic correlates in non-invasive cortical neuromodulation for visceral pain. *Eur J Pain* 2011;15:53–60.
239. Freitas C, Fregni F, Pascual-Leone A. Meta-analysis of the effects of repetitive transcranial magnetic stimulation (rTMS) on negative and positive symptoms in schizophrenia. *Schizophr Res* 2009;108:11–24.
240. Fuggetta G, Noh NA. A neurophysiological insight into the potential link between transcranial magnetic stimulation, thalamocortical dysrhythmia and neuropsychiatric disorders. *Exp Neurol* 2013;245:87–95.
241. Fujiki M, Kobayashi H, Abe T, Kamida T. Repetitive transcranial magnetic stimulation for protection against delayed neuronal death induced by transient ischemia. *J Neurosurg* 2003;99:1063–9.
242. Fumal A, Coppola G, Bohotin V, Gérardy PY, Seidel L, Donneau AF, et al. Induction of long-lasting changes of visual cortex excitability by five daily sessions of repetitive transcranial magnetic stimulation (rTMS) in healthy volunteers and migraine patients. *Cephalalgia* 2006;26:143–9.
243. Gamboa OL, Antal A, Moliadze V, Paulus W. Simply longer is not better: reversal of theta burst after-effect with prolonged stimulation. *Exp Brain Res* 2010;204:181–7.
244. Gangitano M, Valero-Cabre A, Tormos JM, Mottaghy FM, Romero JR, Pascual-Leone A. Modulation of input–output curves by low and high frequency repetitive transcranial magnetic stimulation of the motor cortex. *Clin Neurophysiol* 2002;113:1249–57.
245. Garcia-Toro M, Mayol A, Arnillas H, Capllonch I, Ibarra O, Crespí M, et al. Modest adjunctive benefit with transcranial magnetic stimulation in medication- resistant depression. *J Affect Disord* 2001a;64:271–5.

246. Garcia-Toro M, Pascual-Leone A, Romera M, Gonzalez A, Mico J, Ibarra O, et al. Prefrontal repetitive transcranial magnetic stimulation as add on treatment in depression. *J Neurol Neurosurg Psychiatry* 2001b;71:546–8.
247. Garcia-Toro M, Salva J, Daumal J, Andres J, Romera M, Lafau O, et al. High (20-Hz) and low (1-Hz) frequency transcranial magnetic stimulation as adjuvant treatment in medication-resistant depression. *Psychiatry Res* 2006;146:53–7.
248. Garcin B, Roze E, Mesrati F, Cognat E, Fournier E, Vidailhet M, et al. Transcranial magnetic stimulation as an efficient treatment for psychogenic movement disorders. *J Neurol Neurosurg Psychiatry* 2013;84:1043–6.
249. George MS, Wassermann EM, Kimbrell TA, Little JT, Williams WE, Danielson AL, et al. Mood improvement following daily left prefrontal repetitive transcranial magnetic stimulation in patients with depression: a placebo-controlled crossover trial. *Am J Psychiatry* 1997;154:1752–6.
250. George MS, Nahas Z, Molloy M, Speer AM, Oliver NC, Li XB, et al. A controlled trial of daily left prefrontal cortex TMS for treating depression. *Biol Psychiatry* 2000;48:962–70.
251. George MS, Lisanby SH, Avery D, McDonald WM, Durkalski V, Pavlicova M, et al. Daily left prefrontal transcranial magnetic stimulation therapy for major depressive disorder: a sham-controlled randomized trial. *Arch Gen Psychiatry* 2010;67:507–16.
252. George MS, Post RM. Daily left prefrontal repetitive transcranial magnetic stimulation for acute treatment of medication-resistant depression. *Am J Psychiatry* 2011;168:356–64.
253. George MS, Taylor JJ, Short EB. The expanding evidence base for rTMS treatment of depression. *Curr Opin Psychiatry* 2013;26:13–8.
254. Gerloff C, Bushara K, Sailer A, Wassermann E, Chen R, Matsuoka T, et al. Multimodal imaging of brain reorganization in motor areas of the contralesional hemisphere of well recovered patients after capsular stroke. *Brain* 2006;129:791–808.
255. Gerschlagel W, Siebner HR, Rothwell JC. Decreased corticospinal excitability after subthreshold 1 Hz rTMS over lateral premotor cortex. *Neurology* 2001;57:449–55.
256. Gerschlagel W, Christensen LO, Bestmann S, Rothwell JC. rTMS over the cerebellum can increase corticospinal excitability through a spinal mechanism involving activation of peripheral nerve fibres. *Clin Neurophysiol* 2002;113:1435–40.
257. Gershon AA, Dannon PN, Grunhaus L. Transcranial magnetic stimulation in the treatment of depression. *Am J Psychiatry* 2003;160:835–45.
258. Geven LI, de Kleine E, Willemsen AT, van Dijk P. Asymmetry in primary auditory cortex activity in tinnitus patients and controls. *Neuroscience* 2014;256:117–25.
259. Geyer S, Ledberg A, Schleicher A, Kinomura S, Schormann T, Burgel U, et al. Two different areas within the primary motor cortex of man. *Nature* 1996;382:805–7.
260. Ghabra MB, Hallett M, Wassermann EM. Simultaneous repetitive transcranial magnetic stimulation does not speed fine movement in PD. *Neurology* 1999;52:768–70.
261. Gillick BT, Krach LE, Feyma T, Rich TL, Moberg K, Thomas W, et al. Primed low-frequency repetitive transcranial magnetic stimulation and constraint-induced movement therapy in pediatric hemiparesis: a randomized controlled trial. *Dev Med Child Neurol* 2014;56:44–52.
262. Gironell A, Kulisevsky J, Lorenzo J, Barbanoj M, Pascual-Sedano B, Otermin P. Transcranial magnetic stimulation of the cerebellum in essential tremor: a controlled study. *Arch Neurol* 2002;59:413–7.

263. Goldstein RZ, Volkow ND. Drug addiction and its underlying neuro-biological basis: neuroimaging evidence for the involvement of the frontal cortex. *Am J Psychiatry* 2002;159:1642–52.
264. Goldsworthy MR, Pitcher JB, Ridding MC. The application of spaced theta burst protocols induces long-lasting neuroplastic changes in the human motor cortex. *Eur J Neurosci* 2012;35:125–34.
265. Gomes PV, Brasil-Neto JP, Allam N, Rodrigues de Souza E. A randomized, double-blind trial of repetitive transcranial magnetic stimulation in obsessive-compulsive disorder with three-month follow-up. *J Neuropsychiatry Clin Neurosci* 2012;24:437–43.
266. González-García N, Armony JL, Soto J, Trejo D, Alegria MA, Drucker-Colin R. Effects of rTMS on Parkinson's disease: a longitudinal fMRI study. *J Neurol* 2011;258:1268–80.
267. Goto T, Saitoh Y, Hashimoto N, Hirata M, Kishima H, Oshino S, et al. Diffusion tensor fiber tracking in patients with central post-stroke pain; correlation with efficacy of repetitive transcranial magnetic stimulation. *Pain* 2008;140:509–18.
268. Graff-Guerrero A, Gonzales-Olvera J, Ruiz-Garcia M, Avila-Ordonez U, Vaugier V, Garcia-Reyna JC. rTMS reduces focal brain hyperperfusion in two patients with EPC. *Acta Neurol Scand* 2004;109:290–6.
269. Greenberg BD, George MS, Martin JD, Benjamin J, Schlaepfer TE, Altemus M, et al. Effect of prefrontal repetitive transcranial magnetic stimulation in obsessive-compulsive disorder: a preliminary study. *Am J Psychiatry* 1997;154:867–9.
270. Grefkes C, Nowak DA, Wang LE, Dafotakis M, Eickhoff SB, Fink GR. Modulating cortical connectivity in stroke patients by rTMS assessed with fMRI and dynamic causal modeling. *Neuroimage* 2010;50:233–42.
271. Gross M, Nakamura L, Pascual-Leone A, Fregni F. Has repetitive transcranial magnetic stimulation (rTMS) treatment for depression improved? A systematic review and meta-analysis comparing the recent vs. the earlier rTMS studies. *Acta Psychiatr Scand* 2007;116:165–73.
272. Grüner U, Eggers C, Ameli M, Sarfeld AS, Fink GR, Nowak DA. 1 Hz rTMS preconditioned by tDCS over the primary motor cortex in Parkinson's disease: effects on bradykinesia of arm and hand. *J Neural Transm* 2010;117:207–16.
273. Grunhaus L, Dannon PN, Schreiber S, Dolberg OH, Amiaz R, Ziv R, et al. Repetitive transcranial magnetic stimulation is as effective as electroconvulsive therapy in the treatment of nondelusional major depressive disorder: an open study. *Biol Psychiatry* 2000;47: 324–314.
274. Grunhaus L, Schreiber S, Dolberg OT, Polak D, Dannon PN. A randomized controlled comparison of electroconvulsive therapy and repetitive transcranial magnetic stimulation in severe and resistant nonpsychotic major depression. *Biol Psychiatry* 2003;53:324–31.
275. Guo J, Zhou M, Yang M, Zhu C, He L. Repetitive transcranial magnetic stimulation for the treatment of amyotrophic lateral sclerosis or motor neuron disease. *Cochrane Database Syst Rev* 2011(9):CD008554.
276. Hadley D, Anderson BS, Borckardt JJ, Arana A, Li X, Nahas Z, et al. Safety, tolerability, and effectiveness of high doses of adjunctive daily left prefrontal repetitive transcranial magnetic stimulation for treatment-resistant depression in a clinical setting. *J ECT* 2011;27:18–25.
277. Hajak G, Marienhagen J, Langguth B, Werner S, Binder H, Eichhammer P. High-frequency repetitive transcranial magnetic stimulation in schizophrenia: a combined treatment and neuroimaging study. *Psychol Med* 2004;34: 1157–63.

278. Hamada M, Terao Y, Hanajima R, Shirota Y, Nakatani-Enomoto S, Furubayashi T, et al. Bidirectional long-term motor cortical plasticity and metaplasticity induced by quadripulse transcranial magnetic stimulation. *J Physiol* 2008a;586:3927–47.
279. Hamada M, Ugawa Y, Tsuji S. High-frequency rTMS over the supplementary motor area for treatment of Parkinson's disease. *Mov Disord* 2008b;23:1524–31.
280. Hamada M, Hanajima R, Terao Y, Okabe S, Nakatani-Enomoto S, Furubayashi T, et al. Primary motor cortical metaplasticity induced by priming over the supplementary motor area. *J Physiol* 2009a;587:4845–62.
281. Hamada M, Ugawa Y, Tsuji S. High-frequency rTMS over the supplementary motor area improves bradykinesia in Parkinson's disease: subanalysis of double-blind sham-controlled study. *J Neurol Sci* 2009b;287:143–6.
282. Hamada M, Murase N, Hasan A, Balaratnam M, Rothwell JC. The role of interneuron networks in driving human motor cortical plasticity. *Cereb Cortex* 2013;23:1593–605.
283. Hamilton RH, Chrysikou EG, Coslett B. Mechanisms of aphasia recovery after stroke and the role of noninvasive brain stimulation. *Brain Lang* 2010a;118:40–50.
284. Hamilton RH, Sanders L, Benson J, Faseyitan O, Norise C, Naeser M, et al. Stimulating conversation: enhancement of elicited propositional speech in a patient with chronic non-fluent aphasia following transcranial magnetic stimulation. *Brain Lang* 2010b;113:45–50.
285. Hanajima R, Ugawa Y, Machii K, Mochizuki H, Terao Y, Enomoto H, et al. Interhemispheric facilitation of the hand motor area in humans. *J Physiol* 2001;531:849–59.
286. Hanajima R, Wang R, Nakatani-Enomoto S, Hamada M, Terao Y, Furubayashi T, et al. Comparison of different methods for estimating motor threshold with transcranial magnetic stimulation. *Clin Neurophysiol* 2007;118:2120–2.
287. Hansen PE, Ravnkilde B, Videbech P, Clemmensen K, Sturlason R, Reiner M, et al. Low-frequency repetitive transcranial magnetic stimulation inferior to electroconvulsive therapy in treating depression. *J ECT* 2011;27:26–32.
288. Hao Z, Wang D, Zeng Y, Liu M. Repetitive transcranial magnetic stimulation for improving function after stroke. *Cochrane Database Syst Rev* 2013;5:CD008862. Hartelius L, Svantesson P, Hedlund A, Holmberg B, Revesz D, Thorlin T. Short-term effects of repetitive transcranial magnetic stimulation on speech and voice in
289. individuals with Parkinson's disease. *Folia Phoniatr Logop* 2010;62:104–9.
290. Hausmann A, Kemmler G, Walpoth M, Mechtcheriakov S, Kramer-Reinstadler K, Lechner T, et al. No benefit derived from repetitive transcranial magnetic stimulation in depression: a prospective, single centre, randomised, double blind, sham controlled add on" trial. *J Neurol Neurosurg Psychiatry* 2004a;75:320–2.
291. Hausmann A, Pascual-Leone A, Kemmler G, Rupp CI, Lechner-Schoner T, Kramer-Reinstadler K, et al. No deterioration of cognitive performance in an aggressive unilateral and bilateral antidepressant rTMS add-on trial. *J Clin Psychiatry* 2004b;65:772–82.
292. Havrankova P, Jech R, Walker ND, Operto G, Tauchmanova J, Vymazal J, et al. Repetitive TMS of the somatosensory cortex improves writer's cramp and enhances cortical activity. *Neuro Endocrinol Lett* 2010;31:73–86.
293. Hayward G, Mehta MA, Harmer C, Spinks TJ, Grasby PM, Goodwin GM. Exploring the physiological effects of double-cone coil TMS over the medial frontal cortex on the anterior cingulate cortex: an H2(15)O PET study. *Eur J Neurosci* 2007;25:2224–33.
294. Heinz A, Beck A, Grusser M, Grace AA, Wrase J. Identifying the neural circuitry of alcohol craving and relapse vulnerability. *Addict Biol* 2009;14:108–18.

295. Heiss WD, Hartmann A, Rubi-Fessen I, Anglade C, Kracht L, Kessler J, et al. Noninvasive brain stimulation for treatment of right- and left-handed poststroke aphasics. *Cerebrovasc Dis* 2013;36:363–72.
296. Herbsman T, Avery D, Ramsey D, Holtzheimer P, Wadjik C, Hardaway F, et al. More lateral and anterior prefrontal coil location is associated with better repetitive transcranial magnetic stimulation antidepressant response. *Biol Psychiatry* 2009;66:509–15.
297. Herremans SC, Baeken C, Vanderbruggen N, Vanderhasselt MA, Zeeuws D, Santermans L, et al. No influence of one right sided prefrontal HF-rTMS session on alcohol craving in recently detoxified alcohol-dependent patients: results of a naturalistic study. *Drug Alcohol Depend* 2012;120:209–13.
298. Herwig U, Padberg F, Unger J, Spitzer M, Schönfeldt-Lecuona C. Transcranial magnetic stimulation in therapy studies: examination of the reliability of “standard” coil positioning by neuronavigation. *Biol Psychiatry* 2001;50: 58–61.
299. Herwig U, Satrapi P, Schönfeldt-Lecuona C. Using the International 10–20 EEG System for Positioning of Transcranial Magnetic Stimulation Brain Topogr 2003;16:95–9.
300. Herwig U, Fallgatter AJ, Hoppner J, Eschweiler GW, Kron M, Hajak G, et al. Antidepressant effects of augmentative transcranial magnetic stimulation: randomised multicentre trial. *Br J Psychiatry* 2007;191:441–8.
301. Hirayama A, Saitoh Y, Kishima H, Shimokawa T, Oshino S, Hirata M, et al. Reduction of intractable deafferentation pain by navigation-guided repetitive transcranial magnetic stimulation of the primary motor cortex. *Pain* 2006;122:22–7.
302. Hoekstra CE, Versnel H, Neggers SF, Niesten ME, van Zanten GA. Bilateral low- frequency repetitive transcranial magnetic stimulation of the auditory cortex in tinnitus patients is not effective: a randomised controlled trial. *Audiol Neurotol* 2013;18:362–73.
303. Hoffland BS, Kassavetis P, Bologna M, Teo JT, Bhatia KP, Rothwell JC, et al. Cerebellum-dependent associative learning deficits in primary dystonia are normalized by rTMS and practice. *Eur J Neurosci* 2013;38:2166–71.
304. Hoffman RE, Boutros NN, Berman RM, Roessler E, Belger A, Krystal JH, et al. Transcranial magnetic stimulation of left temporoparietal cortex in three patients reporting hallucinated voices. *Biol Psychiatry* 1999;46:130–2.
305. Hoffman RE, Boutros NN, Hu S, Berman RM, Krystal JH, Charney DS. Transcranial magnetic stimulation and auditory hallucinations in schizophrenia. *Lancet* 2000;355:1073–5.
306. Hoffman RE, Gueorguieva R, Hawkins KA, Varanko M, Boutros NN, Wu YT, et al. Temporoparietal transcranial magnetic stimulation for auditory hallucinations: safety, efficacy and moderators in a fifty patient sample. *Biol Psychiatry* 2005;58:97–104.
307. Holi MM, Eronen M, Toivonen K, Toivonen P, Marttunen M, Naukkarinen H. Left prefrontal repetitive transcranial magnetic stimulation in schizophrenia. *Schizophr Bull* 2004;30:429–34.
308. Holtzheimer 3rd PE, McDonald WM, Mufti M, Kelley ME, Quinn S, Corso G, et al. Accelerated repetitive transcranial magnetic stimulation for treatment- resistant depression. *Depress Anxiety* 2010;27:960–3.
309. Homan P, Kindler J, Hauf M, Hubl D, Dierks T. Cerebral blood flow identifies responders to transcranial magnetic stimulation in auditory verbal hallucinations *Transl Psychiatry* 2012;2:e189.
310. Hoogendam JM, Ramakers GMJ, Di Lazzaro V. Physiology of repetitive transcranial magnetic stimulation of the human brain. *Brain Stimul* 2010;3:95–118.

311. Höppner J, Schulz M, Irmisch G, Mau R, Schlafke D, Richter J. Antidepressant efficacy of two different rTMS procedures. High frequency over left versus low frequency over right prefrontal cortex compared with sham stimulation. *Eur Arch Psychiatry Clin Neurosci* 2003;253:103–9.
312. Höppner J, Berger C, Walter U, Padberg F, Buchmann J, Herwig U, et al. Influence of repetitive transcranial magnetic stimulation on special symptoms in depressed patients. *Restor Neurol Neurosci* 2010;28:577–86.
313. Höppner J, Broese T, Wendler L, Berger C, Thome J. Repetitive transcranial magnetic stimulation (rTMS) for treatment of alcohol dependence. *W. J. Biol. Psychiatry* 2011;12:57–62.
314. Hosomi K, Saitoh Y, Kishima H, Oshino S, Hirata M, Tani N, et al. Electrical stimulation of primary motor cortex within the central sulcus for intractable neuropathic pain. *Clin Neurophysiol* 2008;119:993–1001.
315. Hosomi K, Shimokawa T, Ikoma K, Nakamura Y, Sugiyama K, Ugawa Y, et al. Daily repetitive transcranial magnetic stimulation of primary motor cortex for neuropathic pain: a randomized, multicenter, double-blind, crossover, sham- controlled trial. *Pain* 2013;154:1065–72.
316. Houdayer E, Degardin A, Cassim F, Bocquillon P, Derambure P, Devanne H. The effects of low- and high-frequency repetitive TMS on the input/output properties of the human corticospinal pathway. *Exp Brain Res* 2008;187: 207–17.
317. Houzé B, Bradley C, Magnin M, Garcia-Larrea L. Changes in sensory hand representation and pain thresholds induced by motor cortex stimulation in humans. *Cereb Cortex* 2013;23:2667–76.
318. Hovington CL, McGirr A, Lepage M, Berlim MT. Repetitive transcranial magnetic stimulation (rTMS) for treating major depression and schizophrenia: a systematic review of recent meta-analyses. *Ann Med* 2013;45:308–21.
319. Hrobjartsson A, Gotzsche PC. Is the placebo powerless? An analysis of clinical trials comparing placebo with no treatment. *N Engl J Med* 2001;344:1594–602.
320. Hsu WY, Cheng CH, Lin MW, Shih YH, Liao KK, Lin YY. Antiepileptic effects of low frequency repetitive transcranial magnetic stimulation: a meta-analysis. *Epilepsy Res* 2011;96:231–40.
321. Hsu WY, Cheng CH, Liao KK, Lee IH, Lin YY. Effects of repetitive transcranial magnetic stimulation on motor functions in patients with stroke: a meta- analysis. *Stroke* 2012;43:1849–57.
322. Hsu YF, Huang YZ, Lin YY, Tang CW, Liao KK, Lee PL, et al. Intermittent theta burst stimulation over ipsilesional primary motor cortex of subacute ischemic stroke patients: a pilot study. *Brain Stimul* 2013;6:166–74.
323. Huang YZ, Edwards MJ, Rounis E, Bhatia KP, Rothwell JC. Theta burst stimulation of the human motor cortex. *Neuron* 2005;45:201–6.
324. Huang YZ, Rothwell JC, Lu CS, Wang J, Chen RS. Restoration of motor inhibition through an abnormal premotor–motor connection in dystonia. *Mov Disord* 2010;25:696–703.
325. Hummel FC, Celnik P, Pascual-Leone A, Fregni F, Byblow WD, Buetefisch CM, et al. Controversy: noninvasive and invasive cortical stimulation show efficacy in treating stroke patients. *Brain Stimul* 2008;1:370–82.
326. Ikeguchi M, Touge T, Nishiyama Y, Takeuchi H, Kuriyama S, Ohkawa M. Effects of successive repetitive transcranial magnetic stimulation on motor performances and brain perfusion in idiopathic Parkinson’s disease. *J Neurol Sci* 2003;209: 41–6.

328. Irlbacher K, Kuhnert J, Roricht S, Meyer BU, Brandt SA. (Central and peripheral deafferent pain: therapy with repetitive transcranial magnetic stimulation). *Nervenarzt* 2006;77:1196–203.
329. Isenberg K, Downs D, Pierce K, Svarakic D, Garcia K, Jarvis M, et al. Low frequency rTMS stimulation of the right frontal cortex is as effective as high frequency rTMS stimulation of the left frontal cortex for antidepressant-free, treatment-resistant depressed patients. *Ann Clin Psychiatry* 2005;17:153–9.
330. Isserles M, Shalev AY, Roth Y, Peri T, Kutz I, Zlotnick E, et al. Effectiveness of deep transcranial magnetic stimulation combined with a brief exposure procedure in post-traumatic stress disorder – a pilot study. *Brain Stimul* 2013;6:377–83.
331. Jandl M, Steyer J, Weber M, Linden DE, Rothmeier J, Maurer K, et al. Treating auditory hallucinations by transcranial magnetic stimulation: a randomized controlled cross-over trial. *Neuropsychobiology* 2006;53:63–9.
332. Janicak PG, Dowd SM, Martis B, Alam D, Beedle D, Krasuski J, et al. Repetitive transcranial magnetic stimulation versus electroconvulsive therapy for major depression: preliminary results of a randomized trial. *Biol Psychiatry* 2002;51:659–67.
333. Jansen JM, Daams JG, Koeter MW, Veltman DJ, van den Brink W, Goudriaan AE. Effects of non-invasive neurostimulation on craving: a meta-analysis. *Neurosci Biobehav Rev* 2013;37:2472–80.
334. Januel D, Dumortier G, Verdon CM, Stamatiadis L, Saba G, Cabaret W, et al. A double-blind sham controlled study of right prefrontal repetitive transcranial magnetic stimulation (rTMS): therapeutic and cognitive effect in medication free unipolar depression during 4 weeks. *Prog Neuropsychopharmacol Biol Psychiatry* 2006;30:126–30.
335. Jardri R, Lucas B, Delevoye-Turrell Y, Delmaire C, Delion P, Thomas P, et al. An 11-year-old boy with drug-resistant schizophrenia treated with temporo-parietal rTMS. *Mol Psychiatry* 2007;12:320.
336. Jardri R, Delevoye-Turrell Y, Lucas B, Pins D, Bulot V, Delmaire C, et al. Clinical practice of rTMS reveals a functional dissociation between agency and hallucinations in schizophrenia. *Neuropsychologia* 2009;47:132–8.
337. Jetté F, Côté I, Meziane HB, Mercier C. Effect of single-session repetitive transcranial magnetic stimulation applied over the hand versus leg motor area on pain after spinal cord injury. *Neurorehabil Neural Repair* 2013;27:636–43.
338. Jin Y, Potkin SG, Kemp AS, Huerta ST, Alva G, Thai TM, et al. Therapeutic effects of individualized alpha frequency transcranial magnetic stimulation (alphaTMS) on the negative symptoms of schizophrenia. *Schizophr Bull* 2006;32:556–61.
339. Johansen-Berg H, Rushworth M, Bogdanovic M, Kischka U, Wimalaratna S, Matthews P. The role of ipsilateral premotor cortex in hand movement after stroke. *Proc Natl Acad Sci USA* 2002;99:14518–23.
340. Joo EY, Han SJ, Chung SH, Cho JW, Seo DW, Hong SB. Antiepileptic effects of low-frequency repetitive transcranial magnetic stimulation by different stimulation durations and locations. *Clin Neurophysiol* 2007;118:702–8.
341. Jorge RE, Robinson RG, Tateno A, Narushima K, Acion L, Moser D, et al. Repetitive transcranial magnetic stimulation as treatment of poststroke depression: a preliminary study. *Biol Psychiatry* 2004;55:398–405.
342. Jorge RE, Moser DJ, Acion L, Robinson RG. Treatment of vascular depression using repetitive transcranial magnetic stimulation. *Arch Gen Psychiatry* 2008;65: 268–76.

343. Kakuda W, Abo M, Kaito N, Watanabe M, Senoo A. Functional MRI-based therapeutic rTMS strategy for aphasic stroke patients: a case series pilot study. *Int J Neurosci* 2010a;120:60–6.
344. Kakuda W, Abo M, Kobayashi K, Momosaki R, Yokoi A, Fukuda A, et al. Low- frequency repetitive transcranial magnetic stimulation and intensive
345. occupational therapy for poststroke patients with upper limb hemiparesis: preliminary study of a 15-day protocol. *Int J Rehabil Res* 2010b;33:339–45.
346. Kakuda W, Abo M, Uruma G, Kaito N, Watanabe M. Low-frequency rTMS with language therapy over a 3-month period for sensory-dominant aphasia: case series of two post-stroke Japanese patients. *Brain Inj* 2010c;24:1113–7.
347. Kakuda W, Abo M, Kobayashi K, Momosaki R, Yokoi A, Fukuda A, et al. Anti-spastic effect of low-frequency rTMS applied with occupational therapy in post-stroke patients with upper limb hemiparesis. *Brain Inj* 2011a;25:496–502.
348. Kakuda W, Abo M, Momosaki R, Morooka A. Therapeutic application of 6-Hz- primed low-frequency rTMS combined with intensive speech therapy for post- stroke aphasia. *Brain Inj* 2011b;25:1242–8.
349. Kakuda W, Abo M, Shimizu M, Sasanuma J, Okamoto T, Yokoi A, et al. A multi-center study on low-frequency rTMS combined with intensive occupational therapy for upper limb hemiparesis in post-stroke patients. *J Neuroeng Rehabil* 2012;9:4.
350. Kakuda W, Abo M, Nakayama Y, Kiyama A, Yoshida H. High-frequency rTMS using a double cone coil for gait disturbance. *Acta Neurol Scand* 2013;128:100–6.
351. Kalra L, Rossini PM. Influencing poststroke plasticity with electromagnetic brain stimulation: myth or reality? *Neurology* 2010;75:2146–7.
352. Kammer T, Beck S, Thielscher A, Laubis-Herrmann U, Topka H. Motor thresholds in humans: a transcranial magnetic stimulation study comparing different pulse waveforms, current directions and stimulator types. *Clin Neurophysiol* 2001;112:250–8.
353. Kang BS, Shin HI, Bang MS. Effect of repetitive transcranial magnetic stimulation over the hand motor cortical area on central pain after spinal cord injury. *Arch Phys Med Rehabil* 2009;90:1766–71.
354. Karnath HO, Rennig J, Johannsen L, Rorden C. The anatomy underlying acute versus chronic spatial neglect: a longitudinal study. *Brain* 2011;134:903–12.
355. Keck ME, Sillaber I, Ebner K, Welt T, Toschi N, Kaehler ST, et al. Acute transcranial magnetic stimulation of frontal brain regions selectively modulates the release of vasopressin, biogenic amines and amino acids in the rat brain. *Eur J Neurosci* 2000;12:3713–20.
356. Keck M, Welt T, Muller M, Erhardt A, Ohl F, Toschi N, et al. Repetitive transcranial magnetic stimulation increases the release of dopamine in the mesolimbic and mesostriatal system. *Neuropharmacology* 2002;43:101–9.
357. Kennedy SH, Javanmard M, Vaccarino FJ. A review of functional neuroimaging in mood disorders: positron emission tomography and depression. *Can J Psychiatry* 1997;42:467–75.
358. Kennedy SH, Milev R, Giacobbe P, Ramasubbu R, Lam RW, Parikh SV, et al. Canadian Network for Mood and Anxiety Treatments (CANMAT) Clinical guidelines for the management of major depressive disorder in adults. IV. Neurostimulation therapies. *J Affect Disord* 2009;117(Suppl 1):S44–53.
359. Keshtkar M, Ghanizadeh A, Froozabadi A. Repetitive transcranial magnetic stimulation versus electroconvulsive therapy for the treatment of major depressive disorder, a randomized controlled clinical trial. *J ECT* 2011;27:310–4.

360. Khedr EM, Abo-Elfetoh N. Therapeutic role of rTMS on recovery of dysphagia in patients with lateral medullary syndrome and brainstem infarction. *J Neurol Neurosurg Psychiatry* 2010;81:495–9.
361. Khedr EM, Farweez HM, Islam H. Therapeutic effect of repetitive transcranial magnetic stimulation on motor function in Parkinson's disease patients. *Eur J Neurol* 2003;10:567–72.
362. Khedr EM, Ahmed MA, Fathy N, Rothwell JC. Therapeutic trial of repetitive transcranial magnetic stimulation after acute ischemic stroke. *Neurology* 2005a;65:466–8.
363. Khedr EM, Kotb H, Kamel NF, Ahmed MA, Sadek R, Rothwell JC. Longlasting antalgic effects of daily sessions of repetitive transcranial magnetic stimulation in central and peripheral neuropathic pain. *J Neurol Neurosurg Psychiatry* 2005b;76:833–8.
364. Khedr EM, Rothwell JC, Shawky OA, Ahmed MA, Hamdy A. Effect of daily repetitive transcranial magnetic stimulation on motor performance in Parkinson's disease. *Mov Disord* 2006;21:2201–5.
365. Khedr EM, Rothwell JC, Shawky OA, Ahmed MA, Foly N, Hamdy A. Dopamine levels after repetitive transcranial magnetic stimulation of motor cortex in patients with Parkinson's disease: preliminary results. *Mov Disord* 2007;22:1046–50.
366. Khedr EM, Rothwell JC, Ahmed MA, El-Atar A. Effect of daily repetitive transcranial magnetic stimulation for treatment of tinnitus: comparison of different stimulus frequencies. *J Neurol Neurosurg Psychiatry* 2008;79:212–5.
367. Khedr EM, Abdel-Fadeil MR, Farghali A, Qaid M. Role of 1 and 3 Hz repetitive transcranial magnetic stimulation on motor function recovery after acute ischaemic stroke. *Eur J Neurol* 2009a;16:1323–30.
368. Khedr EM, Abo-Elfetoh N, Rothwell JC. Treatment of post-stroke dysphagia with repetitive transcranial magnetic stimulation. *Acta Neurol Scand* 2009b;119:155–61.
369. Khedr EM, Rothwell JC, El-Atar A. One-year follow up of patients with chronic tinnitus treated with left temporoparietal rTMS. *Eur J Neurol* 2009c;16:404–8. Khedr EM, Abo-Elfetoh N, Rothwell JC, El-Atar A, Sayed E, Khalifa H. Contralateral versus ipsilateral rTMS of temporoparietal cortex for the treatment of chronic unilateral tinnitus: comparative study. *Eur J Neurol* 2010a;17:976–83.
370. Khedr EM, Etraby AE, Hemeda M, Nasef AM, Razek AA. Long-term effect of repetitive transcranial magnetic stimulation on motor function recovery after acute ischemic stroke. *Acta Neurol Scand* 2010b;121:30–7.
371. Khedr EM, Abo El-Fetoh N, Ali AM, El-Hammady DH, Khalifa H, Atta H, et al. Dual-Hemisphere Repetitive Transcranial Magnetic Stimulation for Rehabilitation of Poststroke Aphasia: A Randomized, Double-Blind Clinical Trial. *Neurorehabil Neural Repair* 2014. <http://dx.doi.org/10.1177/1545968314521009>. in press.
372. Kim BG, Kim DY, Kim SK, Kim JM, Baek SH, Moon IS. Comparison of the outcomes of repetitive transcranial magnetic stimulation to the ipsilateral and contralateral auditory cortex in unilateral tinnitus. *Electromagn Biol Med* 2014. <http://dx.doi.org/10.3109/15368378.2013.801353>. in press.
373. Kim BR, Chun MH, Kim DY, Lee SJ. Effect of high- and low-frequency repetitive transcranial magnetic stimulation on visuospatial neglect in patients with acute stroke: a double-blind, sham-controlled trial. *Arch Phys Med Rehabil* 2013;94:803–7.

375. Kim JY, Chung EJ, Lee WY, Shin HY, Lee GH, Choe YS, et al. Therapeutic effect of repetitive transcranial magnetic stimulation in Parkinson's disease: analysis of (11C) raclopride PET study. *Mov Disord* 2008;23:207–11.
376. Kim YH, You SH, Ko MH, Park JW, Lee KH, Jang SH, et al. Repetitive transcranial magnetic stimulation-induced corticomotor excitability and associated motor skill acquisition in chronic stroke. *Stroke* 2006;37:1471–6.
377. Kimberley TJ, Borich MR, Arora S, Siebner HR. Multiple sessions of low-frequency repetitive transcranial magnetic stimulation in focal hand dystonia: clinical and physiological effects. *Restor Neurol Neurosci* 2013;31:533–42.
378. Kimbrell TA, Little JT, Dunn RT, Frye MA, Greenberg BD, Wassermann EM, et al. Frequency dependence of antidepressant response to left prefrontal repetitive transcranial magnetic stimulation (rTMS) as a function of baseline cerebral glucose metabolism. *Biol Psychiatry* 1999;46:1603–13.
379. Kimiskidis VK. Transcranial magnetic stimulation for drug-resistant epilepsies: rationale and clinical experience. *Eur Neurol* 2010;63:205–10.
380. Kimiskidis VK, Kugiumtzis D, Papagiannopoulos S, Vlaikidis N. Transcranial magnetic stimulation (TMS) modulates epileptiform discharges in patients with frontal lobe epilepsy: a preliminary EEG-TMS study. *Int J Neural Syst* 2013;23:1250035.
381. Kimiskidis VK, Valentin A, Kälviäinen R. Transcranial magnetic stimulation for the diagnosis and treatment of epilepsy. *Curr Opin Neurol* 2014;27:236–41.
382. Kindler J, Homan P, Flury R, Strik W, Dierks T, Hubl D. Theta burst transcranial magnetic stimulation for the treatment of auditory verbal hallucinations: results of a randomized controlled study. *Psychiatry Res* 2013a;209:114–7.
383. Kindler J, Homan P, Jann K, Federspiel A, Flury R, Hauf M, et al. Reduced neuronal activity in language-related regions after transcranial magnetic stimulation therapy for auditory verbal hallucinations. *Biol Psychiatry* 2013b;73: 518–24.
384. Kinoshita M, Ikeda A, Begum T, Yamamoto J, Hitomi T, Shibasaki H. Low-frequency repetitive transcranial magnetic stimulation for seizure suppression in patients with extratemporal lobe epilepsy – a pilot study. *Seizure* 2005;14:387–92.
385. Kirton A, Chen R, Friefeld S, Gunraj C, Pontigon AM, Deveber G. Contralesional repetitive transcranial magnetic stimulation for chronic hemiparesis in subcortical paediatric stroke: a randomised trial. *Lancet Neurol* 2008;7:507–13. Kishore A, Popa T, Balachandran A, Chandran S, Pradeep S, Backer F, et al. Cerebellar sensory processing alterations impact motor cortical plasticity in Parkinson's disease: clues from dyskinetic patients. *Cereb Cortex* 2014. <http://dx.doi.org/10.1093/cercor/bht058>. in press.
386. Kito S, Hasegawa T, Koga Y. Cerebral blood flow in the ventromedial prefrontal cortex correlates with treatment response to low-frequency right prefrontal repetitive transcranial magnetic stimulation in the treatment of depression. *Psychiatry Clin Neurosci* 2012;66:138–45.
387. Klein E, Kolsky Y, Puyerosky M, Koren D, Chistyakov A, Feinsod M. Right prefrontal slow repetitive transcranial magnetic stimulation in schizophrenia: a double-blind sham-controlled pilot study. *Biol Psychiatry* 1999a;46:1451–4.
388. Klein E, Kreinin I, Chistyakov A, Koren D, Mecz L, Marmur S, et al. Therapeutic efficacy of right prefrontal slow repetitive transcranial magnetic stimulation in major depression: a double-blind controlled study. *Arch Gen Psychiatry* 1999b;56:315–20.

390. Kleinjung T, Eichhammer P, Langguth B, Jacob P, Marienhagen J, Hajak G, et al. Long-term effects of repetitive transcranial magnetic stimulation (rTMS) in patients with chronic tinnitus. *Otolaryngol Head Neck Surg* 2005;132:566–9.
391. Kleinjung T, Steffens T, Londero A, Langguth B. Transcranial magnetic stimulation (TMS) for treatment of chronic tinnitus: clinical effects. *Prog Brain Res* 2007a;166:359–67.
392. Kleinjung T, Steffens T, Sand P, Murthum T, Hajak G, Strutz J, et al. Which tinnitus patients benefit from transcranial magnetic stimulation? *Otolaryngol Head Neck Surg* 2007b;137:589–95.
393. Kleinjung T, Eichhammer P, Landgrebe M, Sand P, Hajak G, Steffens T, et al. Combined temporal and prefrontal transcranial magnetic stimulation for tinnitus treatment: a pilot study. *Otolaryngol Head Neck Surg* 2008;138:497–501.
394. Klirova M, Horacek J, Novak T, Cermak J, Spaniel F, Skrdlantova L, et al. Individualized rTMS neuronavigated according to regional brain metabolism ((18)FDG PET) has better treatment effects on auditory hallucinations than standard positioning of rTMS: a double-blind, sham-controlled study. *Eur Arch Psychiatry Clin Neurosci* 2013;263:475–84.
395. Knott V, Mahoney C, Kennedy S, Evans K. EEG power, frequency, asymmetry and coherence in male depression. *Psychiatry Res* 2001;106:123–40.
396. Koch G. rTMS effects on levodopa induced dyskinesias in Parkinson's disease patients: searching for effective cortical targets. *Restor Neurol Neurosci* 2010;28:561–8.
397. Koch G, Brusa L, Caltagirone C, Peppe A, Oliveri M, Stanzione P, et al. rTMS of supplementary motor area modulates therapy-induced dyskinesias in Parkinson disease. *Neurology* 2005;65:623–5.
398. Koch G, Mori F, Marconi B, et al. Changes in intracortical circuits of the human motor cortex following theta burst stimulation of the lateral cerebellum. *Clin Neurophysiol* 2008a;119:2559–69.
399. Koch G, Oliveri M, Cheeran B, Ruge D, Lo Gerfo E, Salerno S, et al. Hyperexcitability of parietal-motor functional connections in the intact left-hemisphere of patients with neglect. *Brain* 2008b;131:3147–55.
400. Koch G, Rossi S, Prosperetti C, Codecà C, Monteleone F, Petrosini L, et al. Improvement of hand dexterity following motor cortex rTMS in multiple sclerosis patients with cerebellar impairment. *Mult Scler* 2008c;14:995–8.
401. Koch G, Brusa L, Carrillo F, Lo Gerfo E, Torriero S, Oliveri M, et al. Cerebellar magnetic stimulation decreases levodopa-induced dyskinesias in Parkinson disease. *Neurology* 2009;73:113–9.
402. Koch G, Cercignani M, Bonni S, Giacobbe V, Bucchi G, Versace V, et al. Asymmetry of parietal interhemispheric connections in humans. *J Neurosci* 2011;31:8967–75. Koch G, Bonni` S, Giacobbe V, Bucchi G, Basile B, Lupo F, et al. h-burst stimulation of
403. the left hemisphere accelerates recovery of hemispatial neglect. *Neurology* 2012;78:24–30.
404. Kodama M, Kasahara T, Hyodo M, Aono K, Sugaya M, Koyama Y, et al. Effect of low-frequency repetitive transcranial magnetic stimulation combined with physical therapy on L-dopa-induced painful off-period dystonia in Parkinson's disease. *Am J Phys Med Rehabil* 2011;90:150–5.
405. Koek RJ, Yerevanian BI, Tachiki KH, Smith JC, Alcock J, Kopelowicz A. Hemispheric asymmetry in depression and mania. A longitudinal QEEG study in bipolar disorder. *J Affect Disord* 1999;53:109–22.

406. Koerselman F, Laman DM, van Duijn H, van Duijn MA, Willems MA. A 3-month, follow-up, randomized, placebo-controlled study of repetitive transcranial magnetic stimulation in depression. *J Clin Psychiatry* 2004;65:1323–8.
407. Kondo T, Kakuda W, Yamada N, Shimizu M, Abo M. Effects of repetitive transcranial magnetic stimulation and intensive occupational therapy on motor neuron excitability in post-stroke hemiparetic patients: a neurophysiological investigation using F-wave parameters. *Int J Neurosci* 2014. [http://dx.doi.org/ 10.3109/00207454.2014.897706](http://dx.doi.org/10.3109/00207454.2014.897706). in press.
408. Kranz G, Shamim EA, Lin PT, Kranz GS, Hallett M. Transcranial magnetic brain stimulation modulates blepharospasm: a randomized controlled study. *Neurology* 2010;75:1465–71.
409. Kreuzer PM, Landgrebe M, Schecklmann M, Poepl TB, Vielsmeier V, Hajak G, et al. Can temporal repetitive transcranial magnetic stimulation be enhanced by targeting affective components of tinnitus with frontal rTMS? A randomized controlled pilot trial. *Front Syst Neurosci* 2011;5:88.
410. Krummenacher P, Candia V, Folkers G, Schedlowski M, Schonbachler G. Prefrontal cortex modulates placebo analgesia. *Pain* 2010;148:368–74.
411. Kwon HJ, Lim WS, Lim MH, Lee SJ, Hyun JK, Chae JH, et al. 1-Hz low frequency repetitive transcranial magnetic stimulation in children with Tourette's syndrome. *Neurosci Lett* 2011;492:1–4.
412. Lang N, Siebner HR, Ernst D, Nitsche MA, Paulus W, Lemon RN, et al. Preconditioning with transcranial direct current stimulation sensitizes the motor cortex to rapid-rate transcranial magnetic stimulation and controls the direction of after-effects. *Biol Psychiatry* 2004;56:634–9.
413. Langguth B, Eichhammer P, Wiegand R, Marienhagen J, Maenner P, Jacob P, et al. Neuronavigated rTMS in a patient with chronic tinnitus. Effects of 4 weeks treatment. *Neuroreport* 2003;14:977–80.
414. Langguth B, Wiegand R, Kharraz A, Landgrebe M, Marienhagen J, Frick U, et al. Pre-treatment anterior cingulate activity as a predictor of antidepressant response to repetitive transcranial magnetic stimulation (rTMS). *Neuro Endocrinol Lett* 2007;28:633–8.
415. Langguth B, Kleinjung T, Frank E, Landgrebe M, Sand P, Dvorakova J, et al. High-frequency priming stimulation does not enhance the effect of low-frequency rTMS in the treatment of tinnitus. *Exp Brain Res* 2008;184:587–91.
416. Langguth B, Kleinjung T, Landgrebe M, de Ridder D, Hajak G. rTMS for the treatment of tinnitus: the role of neuronavigation for coil positioning. *Neurophysiol Clin* 2010;40:45–58.
417. Langguth B, Landgrebe M, Frank E, Schecklmann M, Sand PG, Vielsmeier V, et al. Efficacy of different protocols of transcranial magnetic stimulation for the treatment of tinnitus: Pooled analysis of two randomized controlled studies. *World J Biol Psychiatry* 2014;15:276–85.
418. Lanting CP, De Kleine E, Bartels H, Van Dijk P. Functional imaging of unilateral tinnitus using fMRI. *Acta Otolaryngol* 2008;128:415–21.
419. Le K, Liu L, Sun M, Hu L, Xiao N. Transcranial magnetic stimulation at 1 Hertz improves clinical symptoms in children with Tourette syndrome for at least 6 months. *J Clin Neurosci* 2013;20:257–62.
420. Le Q, Qu Y, Tao Y, Zhu S. Effects of repetitive transcranial magnetic stimulation on hand function recovery and excitability of the motor cortex after stroke: a meta-analysis. *Am J Phys Med Rehabil* 2014;93:422–30.

421. Lee HY, Yoo SD, Ryu EW, Byun JY, Yeo SG, Park MS. Short term effects of repetitive transcranial magnetic stimulation in patients with catastrophic intractable tinnitus: preliminary report. *Clin Exp Otorhinolaryngol* 2013;6:63–7.
422. Lee JC, Blumberger DM, Fitzgerald PB, Daskalakis ZJ, Levinson AJ. The role of transcranial magnetic stimulation in treatment-resistant depression: a review. *Curr Pharm Des* 2012a;18:5846–52.
423. Lee SH, Kim W, Chung YC, Jung KH, Bahk WM, Jun TY, et al. A double blind study showing that two weeks of daily repetitive TMS over the left or right temporoparietal cortex reduces symptoms in patients with schizophrenia who are having treatment-refractory auditory hallucinations. *Neurosci Lett* 2005;376:177–81.
424. Lee SJ, Kim DY, Chun MH, Kim YG. The effect of repetitive transcranial magnetic stimulation on fibromyalgia: a randomized sham-controlled trial with 1-mo follow-up. *Am J Phys Med Rehabil* 2012b;91:1077–85.
425. Lefaucheur JP. The use of repetitive transcranial magnetic stimulation (rTMS) in chronic neuropathic pain. *Neurophysiol Clin* 2006;36:117–24.
426. Lefaucheur JP. Principles of therapeutic use of transcranial and epidural cortical stimulation. *Clin Neurophysiol* 2008;119:2179–84.
427. Lefaucheur JP. Methods of therapeutic cortical stimulation. *Neurophysiol Clin* 2009a;39:1–14.
428. Lefaucheur JP. Treatment of Parkinson's disease by cortical stimulation. *Expert Rev Neurother* 2009b;9:1755–71.
429. Lefaucheur JP. Why image-guided navigation becomes essential in the practice of transcranial magnetic stimulation. *Neurophysiol Clin* 2010;40:1–5.
430. Lefaucheur JP. Neurophysiology of cortical stimulation. *Int Rev Neurobiol* 2012;107:57–85.
431. Lefaucheur JP, Drouot X, Keravel Y, Nguyen JP. Pain relief induced by repetitive transcranial magnetic stimulation of precentral cortex. *Neuroreport* 2001a;12:2963–5.
432. Lefaucheur JP, Drouot X, Nguyen JP. Interventional neurophysiology for pain control: duration of pain relief following repetitive transcranial magnetic stimulation of the motor cortex. *Neurophysiol Clin* 2001b;31:247–52.
433. Lefaucheur JP, Drouot X, Ménard-Lefaucheur I, Nguyen JP. Neuropathic pain controlled for more than a year by monthly sessions of repetitive transcranial magnetic stimulation of the motor cortex. *Neurophysiol Clin* 2004a;34: 91–5.
434. Lefaucheur JP, Drouot X, Menard-Lefaucheur I, Zerah F, Bendib B, Cesaro P, et al. Neurogenic pain relief by repetitive transcranial magnetic cortical stimulation depends on the origin and the site of pain. *J Neurol Neurosurg Psychiatry* 2004b;75:612–6.
435. Lefaucheur JP, Drouot X, Von Raison F, Menard-Lefaucheur I, Cesaro P, Nguyen JP. Improvement of motor performance and modulation of cortical excitability by repetitive transcranial magnetic stimulation of the motor cortex in Parkinson's disease. *Clin Neurophysiol* 2004c;115:2530–41.
436. Lefaucheur JP, Fénelon G, Ménard-Lefaucheur I, Wendling S, Nguyen JP. Low- frequency repetitive TMS of premotor cortex can reduce painful axial spasms in generalized secondary dystonia: a pilot study of three patients. *Neurophysiol Clin* 2004d;34:141–5.
437. Lefaucheur JP, Drouot X, Menard-Lefaucheur I, Keravel Y, Nguyen JP. Motor cortex rTMS restores defective intracortical inhibition in chronic neuropathic pain. *Neurology* 2006a;67:1568–74.

438. Lefaucheur JP, Hatem S, Nineb A, Ménard-Lefaucheur I, Wendling S, Keravel Y, et al. Somatotopic organization of the analgesic effects of motor cortex rTMS in neuropathic pain. *Neurology* 2006b;67:1998–2004.
439. Lefaucheur JP, Brugieres P, Menard-Lefaucheur I, Wendling S, Pommier M, Bellivier
440. F. The value of navigation-guided rTMS for the treatment of depression: an illustrative case. *Neurophysiol Clin* 2007;37:265–71.
441. Lefaucheur JP, Antal A, Ahdab R, Ciampi de Andrade D, Fregni F, Khedr EM, et al. The use of repetitive transcranial magnetic stimulation (rTMS) and transcranial direct current stimulation (tDCS) to relieve pain. *Brain Stimul* 2008a;1:337–44.
442. Lefaucheur JP, Drouot X, Menard-Lefaucheur I, Keravel Y, Nguyen JP. Motor cortex rTMS in chronic neuropathic pain: pain relief is associated with thermal sensory perception improvement. *J Neurol Neurosurg Psychiatry* 2008b;79:1044–9.
443. Lefaucheur JP, Holsheimer J, Goujon C, Keravel Y, Nguyen JP. Descending volleys generated by efficacious epidural motor cortex stimulation in patients with chronic neuropathic pain. *Exp Neurol* 2010;223:609–14.
444. Lefaucheur JP, André-Obadia N, Poulet E, Devanne H, Haffen E, Londero A, et al. Recommandations françaises sur l'utilisation de la stimulation magnétique transcrânienne répétitive (rTMS): règles de sécurité et indications thérapeutiques. *Neurophysiol Clin* 2011a;41:221–95.
445. Lefaucheur JP, Ménard-Lefaucheur I, Goujon C, Keravel Y, Nguyen JP. Predictive value of rTMS in the identification of responders to epidural motor cortex stimulation therapy for pain. *J Pain* 2011b;12:1102–11.
446. Lefaucheur JP, Ayache SS, Sorel M, Farhat WH, Zouari HG, Ciampi de Andrade D, et al. Analgesic effects of repetitive transcranial magnetic stimulation of the motor cortex in neuropathic pain: influence of theta burst stimulation priming. *Eur J Pain* 2012a;16:1403–13.
447. Lefaucheur JP, Brugières P, Guimont F, Iglesias S, Franco-Rodrigues A, Liégeois-Chauvel C, et al. Navigated rTMS for the treatment of tinnitus: a pilot study with assessment by fMRI and AEPs. *Neurophysiol Clin* 2012b;42:95–109.
448. Lehner A, Schecklmann M, Kreuzer PM, Poepl TB, Rupprecht R, Langguth B. Comparing single-site with multisite rTMS for the treatment of chronic tinnitus
 - clinical effects and neuroscientific insights: study protocol for a randomized controlled trial. *Trials* 2013a;14:269.
449. Lehner A, Schecklmann M, Poepl TB, Kreuzer PM, Vielsmeier V, Rupprecht R, et al. Multisite rTMS for the treatment of chronic tinnitus: stimulation of the cortical tinnitus network—a pilot study. *Brain Topogr* 2013b;26:501–10.
450. Leo RJ, Latif T. Repetitive transcranial magnetic stimulation (rTMS) in experimentally induced and chronic neuropathic pain: a review. *J Pain* 2007;8:453–9.
451. Lepping P, Schönfeldt-Lecuona C, Sambhi RS, Lanka SVN, Lane S, Whittington R, et al. A systematic review of the clinical relevance of repetitive transcranial magnetic stimulation. *Acta Psychiatr Scand* 2014. <http://dx.doi.org/10.1111/acps.12276>. in press.
452. Leung A, Donohue M, Xu R, Lee R, Lefaucheur JP, Khedr EM, et al. rTMS for suppressing neuropathic pain: a meta-analysis. *J Pain* 2009;10:1205–16.
453. Li X, Hartwell KJ, Owens M, Lematty T, Borckardt JJ, Hanlon CA, et al. Repetitive transcranial magnetic stimulation of the dorsolateral prefrontal cortex reduces nicotine cue craving. *Biol. Psychiatry* 2013a;73:714–20.

454. Li X, Malcolm RJ, Huebner K, Hanlon CA, Taylor JJ, Brady KT, et al. Low frequency repetitive transcranial magnetic stimulation of the left dorsolateral prefrontal cortex transiently increases cue-induced craving for methamphetamine: a preliminary study. *Drug Alcohol Depend* 2013b;133:641–6.
455. Liepert J, Zittel S, Weiller C. Improvement of dexterity by single session low- frequency repetitive transcranial magnetic stimulation over the contralesional motor cortex in acute stroke: a double-blind placebo-controlled crossover trial. *Restor Neurol Neurosci* 2007;25:461–5.
456. Lim JY, Kang EK, Paik NJ. Repetitive transcranial magnetic stimulation to hemispatial neglect in patients after stroke: an open-label pilot study. *J Rehabil Med* 2010;42:447–52.
457. Lipton RB, Dodick DW, Silberstein SD, Saper JR, Aurora SK, Pearlman SH, et al. Single-pulse transcranial magnetic stimulation for acute treatment of migraine with aura: a randomised, double-blind, parallel-group, sham-controlled trial. *Lancet Neurol* 2010;9:373–80.
458. Lisanby SH, Gutman D, Luber B, Schroeder C, Sackeim HA. Sham TMS: intracerebral measurement of the induced electrical field and the induction of motor-evoked potentials. *Biol Psychiatry* 2001;49:460–3.
459. Lisanby SH, Husain MM, Rosenquist PB, Maixner D, Gutierrez R, Krystal A, et al. Daily left prefrontal repetitive transcranial magnetic stimulation in the acute treatment of major depression: clinical predictors of outcome in a multisite, randomized controlled clinical trial. *Neuropsychopharmacology* 2009;34: 522–34.
460. Liu A, Pang T, Herman S, Pascual-Leone A, Rotenberg A. Transcranial magnetic stimulation for refractory focal status epilepticus in the intensive care unit. *Seizure* 2013;22:893–6.
461. Lomarev MP, Kanchana S, Bara-Jimenez W, Iyer M, Wassermann EM, Hallett M. Placebo-controlled study of rTMS for the treatment of Parkinson’s disease. *Mov Disord* 2006;21:325–31.
462. Lomarev MP, Kim DY, Richardson SP, Voller B, Hallett M. Safety study of high- frequency transcranial magnetic stimulation in patients with chronic stroke. *Clin Neurophysiol* 2007;118:2072–5.
463. Londero A, Langguth B, De Ridder D, Bonfils P, Lefaucheur JP. Repetitive transcranial magnetic stimulation (rTMS): a new therapeutic approach in subjective tinnitus? *Neurophysiol Clin* 2006;36:145–55.
464. 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. *Am J Psychiatry* 1999;156:946–8.
465. Loo CK, Taylor JL, Gandevia SC, McDarmont BN, Mitchell PB, Sachdev PS. Transcranial magnetic stimulation (TMS) in controlled treatment studies: are some “sham” forms active? *Biol Psychiatry* 2000;47:325–31.
466. Loo CK, Mitchell PB, Croker VM, Malhi GS, Wen W, Gandevia SC, et al. Double-blind controlled investigation of bilateral prefrontal transcranial magnetic stimulation for the treatment of resistant major depression. *Psychol Med* 2003;33:33–40.
467. Loo CK, Mitchell PB, McFarquhar TF, Malhi GS, Sachdev PS. A sham-controlled trial of the efficacy and safety of twice-daily rTMS in major depression. *Psychol Med* 2007;37:341–9.

469. Loo CK, Sainsbury K, Mitchell P, Hadzi-Pavlovic D, Sachdev PS. A sham-controlled trial of left and right temporal rTMS for the treatment of auditory hallucinations. *Psychol Med* 2010;40:541–6.
470. Lorenz I, Muller N, Schlee W, Langguth B, Weisz N. Short-term effects of single repetitive TMS sessions on auditory evoked activity in patients with chronic tinnitus. *J Neurophysiol* 2010;104:1497–505.
471. Lotze M, Markert J, Sauseng P, Hoppe J, Plewnia C, Gerloff C. The role of multiple contralesional motor areas for complex hand movements after internal capsular lesion. *J Neurosci* 2006;26:6096–102.
472. Louise-Bender Pape T, Rosenow J, Lewis G, Ahmed G, Walker M, Guernon A, et al. Repetitive transcranial magnetic stimulation-associated neurobehavioral gains during coma recovery. *Brain Stimul* 2009;2:22–35.
473. Maarrawi J, Peyron R, Mertens P, Costes N, Magnin M, Sindou M, et al. Motor cortex stimulation for pain control induces changes in the endogenous opioid system. *Neurology* 2007;69:827–34.
474. Maeda F, Keenan J, Tormos J, Topka H, Pascual-Leone A. Modulation of corticospinal excitability by repetitive transcranial magnetic stimulation. *Clin Neurophysiol* 2000;111:800–5.
475. Mak MK. Repetitive transcranial magnetic stimulation combined with treadmill training can modulate corticomotor inhibition and improve walking performance in people with Parkinson’s disease. *J Physiother* 2013;59:128.
476. Malcolm MP, Triggs WJ, Light KE, Gonzalez Rothi LJ, Wu S, Reid K, et al. Repetitive transcranial magnetic stimulation as an adjunct to constraint-induced therapy: an exploratory randomized controlled trial. *Am J Phys Med Rehabil* 2007;86:707–15.
477. Malenka RC. Postsynaptic factors control the duration of synaptic enhancement in area CA1 of the hippocampus. *Neuron* 1991;6:53–60.
478. Málly J, Farkas R, Tóthfalusi L, Stone TW. Long-term follow-up study with repetitive transcranial magnetic stimulation (rTMS) in Parkinson’s disease. *Brain Res Bull* 2004;64:259–63.
479. Manes F, Jorge R, Morcuende M, Yamada T, Paradiso S, Robinson RG. A controlled study of repetitive transcranial magnetic stimulation as a treatment of depression in the elderly. *Int Psychogeriatr* 2001;13:225–31.
480. Manganotti P, Formaggio E, Storti SF, Fiaschi A, Battistin L, Tonin P, et al. Effect of high-frequency repetitive transcranial magnetic stimulation on brain excitability in severely brain-injured patients in minimally conscious or vegetative state. *Brain Stimul* 2013;6:913–21.
481. Mansur CG, Fregni F, Boggio PS, Riberto M, Gallucci-Neto J, Santos CM, et al. A sham stimulation-controlled trial of rTMS of the unaffected hemisphere in stroke patients. *Neurology* 2005;64:1802–4.
482. Mansur CG, Myczkowski ML, de Barros Cabral S, Sartorelli Mdo C, Bellini BB, Dias AM, et al. Placebo effect after prefrontal magnetic stimulation in the treatment of resistant obsessive-compulsive disorder: a randomized controlled trial. *Int J Neuropsychopharmacol* 2011;14:1389–97.
483. Mantovani A, Lisanby SH, Pieraccini F, Ulivelli M, Castrogiovanni P, Rossi S. Repetitive transcranial magnetic stimulation (rTMS) in the treatment of obsessive-compulsive disorder (OCD) and Tourette’s syndrome (TS). *Int J Neuropsychopharmacol* 2006;9:95–100.
484. Mantovani A, Leckman JF, Grantz H, King RA, Sporn AL, Lisanby SH. Repetitive transcranial magnetic stimulation of the supplementary motor area in the treatment of Tourette syndrome: report of two cases. *Clin. Neurophysiol* 2007;118:2314–5.

485. Mantovani A, Simpson HB, Fallon BA, Rossi S, Lisanby SH. Randomized sham- controlled trial of repetitive transcranial magnetic stimulation in treatment- resistant obsessive-compulsive disorder. *Int J Neuropsychopharmacol* 2010a;13:217–27.
486. Mantovani A, Westin G, Hirsh J, Lisanby SH. Functional magnetic resonance imaging guided transcranial magnetic stimulation in obsessive-compulsive disorder. *Biol Psychiatry* 2010b;67:39–40.
487. Mantovani A, Simeon D, Urban N, Bulow P, Allart A, Lisanby S. Temporo-parietal junction stimulation in the treatment of depersonalization disorder. *Psy Res* 2011;186:138–40.
488. Mantovani A, Aly M, Dagan Y, Allart A, Lisanby SH. Randomized sham controlled trial of repetitive transcranial magnetic stimulation to the dorsolateral prefrontal cortex for the treatment of panic disorder with comorbid major depression. *J Aff Dis* 2013a;144:153–9.
489. Mantovani A, Rossi S, Bassi BD, Simpson HB, Fallon BA, Lisanby SH. Modulation of motor cortex excitability in obsessive-compulsive disorder: an exploratory study on the relations of neurophysiology measures with clinical outcome. *Psychiatry Res* 2013b;210:1026–32.
490. Marcondes R, Fregni F, Pascual-Leone A. Tinnitus and brain activation: insights from transcranial magnetic stimulation. *Ear Nose Throat J* 2006;85:233–4. 6-8.
491. Marcondes RA, Sanchez TG, Kii MA, Ono CR, Buchpiguel CA, Langguth B, et al. Repetitive transcranial magnetic stimulation improve tinnitus in normal hearing patients: a double-blind controlled, clinical and neuroimaging outcome study. *Eur J Neurol* 2010;17:38–44.
492. Martin PI, Naeser MA, Theoret H, Tormos JM, Nicholas M, Kurland J, et al. Transcranial magnetic stimulation as a complementary treatment for aphasia. *Semin Speech Lang* 2004;25:181–91.
493. Martin PI, Naeser MA, Ho M, Treglia E, Kaplan E, Baker EH, et al. Research with transcranial magnetic stimulation in the treatment of aphasia. *Curr Neurol Neurosci Rep* 2009;9:451–8.
494. Maruo T, Hosomi K, Shimokawa T, Kishima H, Oshino S, Morris S, et al. High- frequency repetitive transcranial magnetic stimulation over the primary foot motor area in Parkinson's disease. *Brain Stimul* 2013;6:884–91.
495. McDonald WM, Easley K, Byrd EH, Holtzheimer P, Tuohy S, Woodard JL, et al. Combination rapid transcranial magnetic stimulation in treatment refractory depression. *Neuropsychiatr Dis Treat* 2006;2:85–94.
496. McDonald WM, Durkalski V, Ball ER, Holtzheimer PE, Pavlicova M, Lisanby SH, et al. Improving the antidepressant efficacy of transcranial magnetic stimulation: maximizing the number of stimulations and treatment location in treatment- resistant depression. *Depress Anxiety* 2011;28:973–80.
497. McIntosh AM, Semple D, Tasker K, Harrison LK, Owens DG, Johnstone EC, et al. Transcranial magnetic stimulation for auditory hallucinations in schizophrenia. *Psychiatry Res* 2004;127:9–17.
498. Medina J, Norise C, Faseyitan O, Coslett HB, Turkeltaub PE, Hamilton RH. Finding the right words: transcranial magnetic stimulation improves discourse productivity in non-fluent aphasia after stroke. *Aphasiology* 2012;26: 1153–68.
499. Meehan SK, Dao E, Linsdell MA, Boyd LA. Continuous theta burst stimulation over the contralesional sensory and motor cortex enhances motor learning post- stroke. *Neurosci Lett* 2011;500:26–30.

500. Meeus O, Blaivie C, Ost J, De Ridder D, Van de Heyning P. Influence of tonic and burst transcranial magnetic stimulation characteristics on acute inhibition of subjective tinnitus. *Otol Neurotol* 2009a;30:697–703.
501. Meeus OM, De Ridder D, Van de Heyning PH. Transcranial magnetic stimulation (TMS) in tinnitus patients. *B-ENT* 2009b;5:89–100.
502. Menkes DL, Gruenthal M. Slow-frequency repetitive transcranial magnetic stimulation in a patient with focal cortical dysplasia. *Epilepsia* 2000;41:240–2. Mennemeier M, Triggs W, Chelette K, Woods A, Kimbrell T, Dornhoffer J. Sham Transcranial Magnetic Stimulation Using Electrical Stimulation of the Scalp.
503. *Brain Stimul* 2009;2:168–73.
504. Mennemeier M, Chelette KC, Allen S, Bartel TB, Triggs W, Kimbrell T, et al. Variable changes in PET activity before and after rTMS treatment for tinnitus. *Laryngoscope* 2011;121:815–22.
505. Mhalla A, Baudic S, Ciampi de Andrade D, Gautron M, Perrot S, Teixeira MJ, et al. Long-term maintenance of the analgesic effects of transcranial magnetic stimulation in fibromyalgia. *Pain* 2011;152:1478–85.
506. Micoulaud-Franchi JA, Richieri R, Cermolacce M, Loundou A, Lancon C, Vion-Dury J. Parieto-temporal alpha EEG band power at baseline as a predictor of antidepressant treatment response with repetitive Transcranial Magnetic Stimulation: a preliminary study. *J Affect Disord* 2012;137:156–60.
507. Minichino A, Bersani FS, Capra E, Pannese R, Bonanno C, Salviati M, et al. ECT, rTMS, and deepTMS in pharmacoresistant drug-free patients with unipolar depression: a comparative review. *Neuropsychiatr Dis Treat* 2012;8:55–64.
508. Minks E, Mareček R, Pavlík T, Ovesná P, Bareš M. Is the cerebellum a potential target for stimulation in Parkinson's disease? Results of 1-Hz rTMS on upper limb motor tasks. *Cerebellum* 2011;10:804–11.
509. Mir P, Matsunaga K, Gilio F, Quinn NP, Siebner HR, Rothwell JC. Dopaminergic drugs restore facilitatory premotor–motor interactions in Parkinson disease. *Neurology* 2005;64:1906–12.
510. Miranda PC, Hallett M, Basser PJ. The electric field induced in the brain by magnetic stimulation: a 3-D finite-element analysis of the effect of tissue heterogeneity and anisotropy. *IEEE Trans Biomed Eng* 2003;50:1074–85.
511. Misawa S, Kuwabara S, Shibuya K, Mamada K, Hattori T. Low-frequency transcranial magnetic stimulation for epilepsy partialis continua due to cortical dysplasia. *J Neurol Sci* 2005;234:37–9.
512. Mishra BR, Nizamine SH, Das B, Praharai SK. Efficacy of repetitive transcranial magnetic stimulation in alcohol dependence: a sham-controlled study. *Addiction* 2010;105:49–55.
513. Misra UK, Kalita J, Bhoi SK. High-rate repetitive transcranial magnetic stimulation in migraine prophylaxis: a randomized, placebo-controlled study. *J Neurol* 2013a;260:2793–801.
514. Misra UK, Kalita J, Tripathi GM, Bhoi SK. Is β endorphin related to migraine headache and its relief? *Cephalalgia* 2013b;33:316–22.
515. Mochizuki H, Terao Y, Okabe S, Furubayashi T, Arai N, Iwata NK, et al. Effects of motor cortical stimulation on the excitability of contralateral motor and sensory cortices. *Exp Brain Res* 2004;158:519–26.

516. Mogg A, Pluck G, Eranti SV, Landau S, Purvis R, Brown RG, et al. A randomized controlled trial with 4-month follow-up of adjunctive repetitive transcranial magnetic stimulation of the left prefrontal cortex for depression. *Psychol Med* 2008;38:323–33.
517. Mohajerani MH, Aminoltejari K, Murphy TH. Targeted mini-strokes produce changes in interhemispheric sensory signal processing that are indicative of disinhibition within minutes. *Proc Natl Acad Sci USA* 2011;108:E183–91.
518. Montagne-Larmurier A, Etard O, Razafimandimby A, Morello R, Dollfus S. Two-day treatment of auditory hallucinations by high frequency rTMS guided by cerebral imaging: a 6 month follow-up pilot study. *Schizophr Res* 2009;113:77–83.
519. Morris RG, Moser EI, Riedel G, Martin SJ, Sandin J, Day M, et al. Elements of a neurobiological theory of the hippocampus: the role of activity-dependent synaptic plasticity in memory. *Philos Trans R Soc Lond B Biol Sci* 2003;358:773–86.
520. Mosimann UP, Schmitt W, Greenberg BD, Kosel M, Muri RM, Berkhoff M, et al. Repetitive transcranial magnetic stimulation: a putative add-on treatment for major depression in elderly patients. *Psychiatry Res* 2004;126:123–33.
521. Müller N, Lorenz I, Langguth B, Weisz N. rTMS induced tinnitus relief is related to an increase in auditory cortical alpha activity. *PLoS One* 2013;8:e55557.
522. Munchau A, Bloem BR, Irlbacher K, Trimble MR, Rothwell JC. Functional connectivity of human premotor and motor cortex explored with repetitive transcranial magnetic stimulation. *J Neurosci* 2002a;22:554–61.
523. Munchau A, Bloem BR, Thilo KV, Trimble MR, Rothwell JC, Robertson MM. Repetitive transcranial magnetic stimulation for Tourette syndrome. *Neurology* 2002b;59:1789–91.
524. Murase N, Duque J, Mazzocchio R, Cohen L. Influence of interhemispheric interactions on motor function in chronic stroke. *Ann Neurol* 2004;55:400–9.
525. Murase N, Rothwell JC, Kaji R, Urushihara R, Nakamura K, Murayama N, et al. Subthreshold low-frequency repetitive transcranial magnetic stimulation over the premotor cortex modulates writer's cramp. *Brain* 2005;128:104–15.
526. Murdoch BE, Ng ML, Barwood CH. Treatment of articulatory dysfunction in Parkinson's disease using repetitive transcranial magnetic stimulation. *Eur J Neurol* 2012;19:340–7.
527. Murdoch BE, Barwood CH. Non-invasive brain stimulation: A new frontier in the treatment of neurogenic speech-language disorders. *Int J Speech Lang Pathol* 2013;15:234–44.
528. Müri RM, Cazzoli D, Nef T, Mosimann UP, Hopfner S, Nyffeler T. Non-invasive brain stimulation in neglect rehabilitation: an update. *Front Hum Neurosci* 2013;7:248.
529. Mylius V, Ayache SS, Zouari HG, Aoun-Sebaïti M, Farhat WH, Lefaucheur JP. Stroke rehabilitation using noninvasive cortical stimulation: hemispatial neglect. *Expert Rev Neurother* 2012a;12:983–91.
530. Mylius V, Borckardt JJ, Lefaucheur JP. Noninvasive cortical modulation of experimental pain. *Pain* 2012b;153:1350–63.
531. Mylius V, Zouari HG, Ayache SS, Farhat WH, Lefaucheur JP. Stroke rehabilitation using noninvasive cortical stimulation: aphasia. *Expert Rev Neurother* 2012c;12:973–82.
532. Mylius V, Ayache SS, Ahdab R, Farhat WH, Zouari HG, Belke M, et al. Definition of DLPFC and M1 according to anatomical landmarks for navigated brain stimulation: inter-rater reliability, accuracy, and influence of gender and age. *Neuroimage* 2013;78:224–32.
533. Naeser MA, Martin PI, Nicholas M, Baker EH, Seekins H, Helm-Estabrooks N, et al. Improved naming after TMS treatments in a chronic, global aphasia patient— case report. *Neurocase* 2005a;11:182–93.

534. Naeser MA, Martin PI, Nicholas M, Baker EH, Seekins H, Kobayashi M, et al. Improved picture naming in chronic aphasia after TMS to part of right Broca's area: an open-protocol study. *Brain Lang* 2005b;93:95–105.
535. Naeser MA, Martin PI, Treglia E, Ho M, Kaplan E, Bashir S, et al. Research with rTMS in the treatment of aphasia. *Restor Neurol Neurosci* 2010;28:511–29.
536. Naeser MA, Martin PI, Theoret H, Kobayashi M, Fregni F, Nicholas M, et al. TMS suppression of right pars triangularis, but not pars opercularis, improves naming in aphasia. *Brain Lang* 2011;119:206–13.
537. Nahas Z, Kozel FA, Li X, Anderson B, George MS. Left prefrontal transcranial magnetic stimulation (TMS) treatment of depression in bipolar affective disorder: a pilot study of acute safety and efficacy. *Bipolar Disord* 2003;5: 40–7.
538. Nakatani-Enomoto S, Hanajima R, Hamada M, Terao Y, Matsumoto H, Shirota Y, et al. Bidirectional modulation of sensory cortical excitability by quadripulse transcranial magnetic stimulation (QPS) in humans. *Clin Neurophysiol* 2012;123:1415–21.
539. Nemeroff CB. The burden of severe depression: a review of diagnostic challenges and treatment alternatives. *J Psychiatr Res* 2007;41:189–206.
540. Nguyen JP, Nizard J, Keravel Y, Lefaucheur JP. Invasive brain stimulation for the treatment of neuropathic pain. *Nat Rev Neurol* 2011;7:699–709.
541. Nitsche MA, Paulus W. Noninvasive Brain Stimulation Protocols in the Treatment of Epilepsy: Current State and Perspectives. *Neurotherapeutics* 2009;6:244–50.
542. Nobler MS, Tenenback CC, Nahas Z, Bohning DE, Shastri A, Kozel FA, et al. Structural and functional neuroimaging of electroconvulsive therapy and transcranial magnetic stimulation. *Depress Anxiety* 2000;12:144–56.
543. Noda Y, Nakamura M, Saeki T, Inoue M, Iwanari H, Kasai K. Potentiation of quantitative electroencephalograms following prefrontal repetitive transcranial magnetic stimulation in patients with major depression. *Neurosci Res* 2013;77:70–7.
544. Norena AJ, Eggermont JJ. Enriched acoustic environment after noise trauma reduces hearing loss and prevents cortical map reorganization. *J Neurosci* 2005;25:699–705.
545. Nowak DA, Grefkes C, Dafotakis M, Eickhoff S, Kust J, Karbe H, et al. Effects of low-frequency repetitive transcranial magnetic stimulation of the contralesional primary motor cortex on movement kinematics and neural activity in subcortical stroke. *Arch Neurol* 2008;65:741–7.
546. Nuti C, Peyron R, Garcia-Larrea L, Brunon J, Laurent B, Sindou M, et al. Motor cortex stimulation for refractory neuropathic pain: four year outcome and predictors of efficacy. *Pain* 2005;118:43–52.
547. Nyffeler T, Wurtz P, Luscher H, Hess CW, Senn W, Pflugshaupt T, et al. Extending lifetime of plastic changes in the human brain. *Eur J Neurosci* 2006;24:2961–6. Nyffeler T, Cazzoli D, Hess CW, Muri RM. One session of repeated parietal theta burst stimulation trains induces long-lasting improvement of visual neglect. *Stroke* 2009;40:2791–6.
548. O'Connell NE, Wand BM, Marston L, Spencer S, Desouza LH. Non-invasive brain stimulation techniques for chronic pain. *Cochrane Database Syst Rev* 2010:CD008208.
549. O'Connell NE, Wand BM, Marston L, Spencer S, Desouza LH. Non-invasive brain stimulation techniques for chronic pain. A report of a Cochrane systematic review and meta-analysis. *Eur J Phys Rehabil Med* 2011;47:309–27.

551. O'Reardon JP, Fontecha JF, Cristancho MA, Newman S. Unexpected reduction in migraine and psychogenic headaches following rTMS treatment for major depression: a report of two cases. *CNS Spectr* 2007a;12:921–5.
552. O'Reardon JP, Solvason HB, Janicak PG, Sampson S, Isenberg KE, Nahas Z, et al. Efficacy and safety of transcranial magnetic stimulation in the acute treatment of major depression: a multisite randomized controlled trial. *Biol Psychiatry* 2007b;62:1208–16.
553. Ohn SH, Chang WH, Park CH, Kim ST, Lee JI, Pascual-Leone A, et al. Neural correlates of the antinociceptive effects of repetitive transcranial magnetic stimulation on central pain after stroke. *Neurorehabil Neural Repair* 2012;26:344–52.
554. Ohnishi T, Hayashi T, Okabe S, Nonaka I, Matsuda H, Iida H, et al. Endogenous dopamine release induced by repetitive transcranial magnetic stimulation over the primary motor cortex: an (11C)Raclopride positron emission tomography study in anesthetized macaque monkeys. *Biol Psychiatry* 2004;55:484–9.
555. Okabe S, Hanajima R, Ohnishi T, Nishikawa M, Imabayashi E, Takano H, et al. Functional connectivity revealed by single-photon emission computed tomography (SPECT) during repetitive transcranial magnetic stimulation (rTMS) of the motor cortex. *Clin Neurophysiol*. 2003a;114:450–7.
556. Okabe S, Ugawa Y, Kanazawa I. Effectiveness of rTMS on Parkinson's Disease Study Group. 0.2-Hz repetitive transcranial magnetic stimulation has no add-on effects as compared to a realistic sham stimulation in Parkinson's disease. *Mov Disord* 2003b;18:382–8.
557. Oliveri M, Rossini PM, Traversa R, Cicinelli P, Filippi MM, Pasqualetti P, et al. Left frontal transcranial magnetic stimulation reduces contralesional extinction in patients with unilateral right brain damage. *Brain* 1999;122:1731–9.
558. Oliveri M, Rossini PM, Filippi MM, Traversa R, Cicinelli P, Palmieri MG, et al. Time-dependent activation of parieto-frontal networks for directing attention to tactile space. A study with paired transcranial magnetic stimulation pulses in right-brain-damaged patients with extinction. *Brain* 2000;123:1939–47.
559. Oliveri M, Bisiach E, Brighina F, Piazza A, La Bua V, Buffa D, et al. rTMS of the unaffected hemisphere transiently reduces contralesional visuospatial hemineglect. *Neurology* 2001;57:1338–40.
560. Orth M, Kirby R, Richardson MP, Snijders AH, Rothwell JC, Trimble MR, et al. Subthreshold rTMS over pre-motor cortex has no effect on tics in patients with Gilles de la Tourette syndrome. *Clin Neurophysiol* 2005;116:764–8.
561. Padberg F, George MS. Repetitive transcranial magnetic stimulation of the prefrontal cortex in depression. *Exp Neurol* 2009;219:2–13.
562. Padberg F, Zwanzger P, Keck ME, Kathmann N, Mikhael P, Ella R, et al. Repetitive transcranial magnetic stimulation (rTMS) in major depression: relation between efficacy and stimulation intensity. *Neuropsychopharmacology* 2002;27:638–45.
563. Padberg F, Zwanzger P, Thoma H, Kathmann N, Haag C, Greenberg BD, et al. Repetitive transcranial magnetic stimulation (rTMS) in pharmacotherapy-
564. refractory major depression: comparative study of fast, slow and sham rTMS. *Psychiatry Res* 1999;88:163–71.
565. Paes F, Machado S, Arias-Carrión O, Velasques B, Teixeira S, Budde H, et al. The value of repetitive transcranial magnetic stimulation (rTMS) for the treatment of anxiety disorders: an integrative review. *CNS Neurol Disord Drug Targets* 2011;10:610–20.

566. Paillère Martinot ML, Galinowski A, Ringuenet D, Gallarda T, Lefaucheur JP, Bellivier F, et al. Influence of prefrontal target region on the efficacy of repetitive transcranial magnetic stimulation in patients with medication-resistant depression: a ((18)F)-fluorodeoxyglucose PET and MRI study. *Int J Neuropsychopharmacol* 2010;13:45–59.
567. Paillère Martinot ML, Martinot JL, Ringuenet D, Galinowski A, Gallarda T, Bellivier F, et al. Baseline brain metabolism in resistant depression and response to transcranial magnetic stimulation. *Neuropsychopharmacology* 2011;36:2710–9.
568. Pal E, Nagy F, Aschermann Z, Balazs E, Kovacs N. The impact of left prefrontal repetitive transcranial magnetic stimulation on depression in Parkinson's disease: a randomized, double-blind, placebo-controlled study. *Mov Disord* 2010;25:2311–7.
569. Pallanti S, Bernardi S. Neurobiology of repeated transcranial magnetic stimulation in the treatment of anxiety: a critical review. *Int Clin Psychopharmacol* 2009;24:163–73.
570. Pallanti S, Bernardi S, Di Rollo A, Antonini S, Quercioli L. Unilateral low frequency versus sequential bilateral repetitive transcranial magnetic stimulation: is simpler better for treatment of resistant depression? *Neuroscience* 2010;167:323–8.
571. Pallanti S, Cantisani A, Grassi G, Antonini S, Cecchelli C, Burian J, et al. rTMS age-dependent response in treatment-resistant depressed subjects: a mini-review. *CNS Spectr* 2012;17:24–30.
572. Park JW, Oh JC, Lee JW, Yeo JS, Ryu KH. The effect of 5Hz high-frequency rTMS over contralesional pharyngeal motor cortex in post-stroke oropharyngeal dysphagia: a randomized controlled study. *Neurogastroenterol Motil* 2013a;25. 324-e250.
573. Park S, Park HJ, Kyeong SH, Moon IS, Kim M, Kim HN, et al. Combined rTMS to the auditory cortex and prefrontal cortex for tinnitus control in patients with depression: a pilot study. *Acta Otolaryngol* 2013b;133:600–6.
574. Pascual-Leone A, Cohen LG, Shotland LI, Dang N, Pikus A, Wassermann EM, et al. No evidence of hearing loss in humans due to transcranial magnetic stimulation. *Neurology* 1992;42:647–51.
575. Pascual-Leone A, Valls-Sole J, Brasil-Neto JP, Cammarota A, Grafman J, Hallett M. Akinesia in Parkinson's disease. II. Effects of subthreshold repetitive transcranial motor cortex stimulation. *Neurology* 1994;44:892–8.
576. Pascual-Leone A, Catala MD, Pascual-Leone Pascual A. Lateralized effect of rapid-rate transcranial magnetic stimulation of the prefrontal cortex on mood. *Neurology* 1996a;46:499–502.
577. Pascual-Leone A, Rubio B, Pallardó F, Catalá MD. Rapid-rate transcranial magnetic stimulation of left dorsolateral prefrontal cortex in drug-resistant depression. *Lancet* 1996b;348:233–7.
578. Passard A, Attal N, Benadhira R, Brasseur L, Saba G, Sichere P, et al. Effects of unilateral repetitive transcranial magnetic stimulation of the motor cortex on chronic widespread pain in fibromyalgia. *Brain* 2007;130: 2661–70.
579. Pati S, Alexopoulos AV. Pharmacoresistant epilepsy: from pathogenesis to current and emerging therapies. *Cleve Clin J Med* 2010;77:457–67.
580. Paus T. Imaging the brain before, during, and after transcranial magnetic stimulation. *Neuropsychologia* 1999;37:219–24.
581. Paus T, Castro-Alamancos MA, Petrides M. Cortico-cortical connectivity of the human mid-dorsolateral frontal cortex and its modulation by repetitive transcranial magnetic stimulation. *Eur J Neurosci* 2001;14:1405–11.

582. Petrides M, Pandya DN. Dorsolateral prefrontal cortex: comparative cytoarchitectonic analysis in the human and the macaque brain and corticocortical connection patterns. *Eur J Neurosci* 1999;11:1011–36.
583. Petrovic P, Kalso E, Petersson KM, Ingvar M. Placebo and opioid analgesia—imaging a shared neuronal network. *Science* 2002;295:1737–40.
584. Picarelli H, Teixeira MJ, de Andrade DC, Myczkowski ML, Luvisotto TB, Yeng LT, et al. Repetitive transcranial magnetic stimulation is efficacious as an add-on to pharmacological therapy in complex regional pain syndrome (CRPS) type I. *J Pain* 2010;11:1203–10.
585. Piccione F, Cavinato M, Manganotti P, Formaggio E, Storti SF, Battistin L, et al. Behavioral and neurophysiological effects of repetitive transcranial magnetic stimulation on the minimally conscious state: a case study. *Neurorehabil Neural Repair* 2011;25:98–102.
586. Piccirillo JF, Garcia KS, Nicklaus J, Pierce K, Burton H, Vlassenko AG, et al. Low-frequency repetitive transcranial magnetic stimulation to the temporoparietal junction for tinnitus. *Arch Otolaryngol Head Neck Surg* 2011;137:221–8.
587. Piccirillo JF, Kallogjeri D, Nicklaus J, Wineland A, Spitznagel Jr EL, Vlassenko AG, et al. Low-frequency repetitive transcranial magnetic stimulation to the temporoparietal junction for tinnitus: four-week stimulation trial. *JAMA Otolaryngol Head Neck Surg* 2013;139:388–95.
588. Pigot M, Loo C, Sachdev P. Repetitive transcranial magnetic stimulation as treatment for anxiety disorders. *Expert Rev Neurother* 2008;8:1449–55.
589. Pleger B, Janssen F, Schwenkreis P, Volker B, Maier C, Tegenthoff M. Repetitive transcranial magnetic stimulation of the motor cortex attenuates pain perception in complex regional pain syndrome type I. *Neurosci Lett* 2004;356:87–90.
591. Plewnia C. Brain stimulation: new vistas for the exploration and treatment of tinnitus. *CNS Neurosci Ther* 2011;17:449–61.
592. Plewnia C, Bartels M, Gerloff C. Transient suppression of tinnitus by transcranial magnetic stimulation. *Ann Neurol* 2003;53:263–6.
593. Plewnia C, Reimold M, Najib A, Brehm B, Reischl G, Plontke SK, et al. Dose-dependent attenuation of auditory phantom perception (tinnitus) by PET-guided repetitive transcranial magnetic stimulation. *Hum Brain Mapp* 2007a;28:238–46.
594. Plewnia C, Reimold M, Najib A, Reischl G, Plontke SK, Gerloff C. Moderate therapeutic efficacy of positron emission tomography-navigated repetitive transcranial magnetic stimulation for chronic tinnitus: a randomised, controlled pilot study. *J Neurol Neurosurg Psychiatry* 2007b;78:152–6.
595. Plewnia C, Vonthein R, Wasserka B, Arfeller C, Naumann A, Schraven SP, et al. Treatment of chronic tinnitus with h burst stimulation: a randomized controlled trial. *Neurology* 2012;78:1628–34.
596. Pollak TA, Nicholson TR, Edwards MJ, David AS. A systematic review of transcranial magnetic stimulation in the treatment of functional (conversion) neurological symptoms. *J Neurol Neurosurg Psychiatry* 2014;85:191–7.
597. Pomeroy VM, Cloud G, Tallis RC, Donaldson C, Nayak V, Miller S. Transcranial magnetic stimulation and muscle contraction to enhance stroke recovery: a randomized proof-of-principle and feasibility investigation. *Neurorehabil Neural Repair* 2007;21:509–17.
598. Popa T, Russo M, Vidailhet M, Roze E, Lehericy S, Bonnet C, et al. Cerebellar rTMS stimulation may induce prolonged clinical benefits in essential tremor, and subjacent changes in functional connectivity: an open label trial. *Brain Stimul* 2013a;6:175–9.

599. Popa T, Velayudhan B, Hubsch C, Pradeep S, Roze E, Vidailhet M, et al. Cerebellar processing of sensory inputs primes motor cortex plasticity. *Cereb Cortex* 2013b;23:305–14.
600. Poulet E, Brunelin J, Bediou B, Bation R, Forgeard L, Dalery J, et al. Slow transcranial magnetic stimulation can rapidly reduce resistant auditory hallucinations in schizophrenia. *Biol Psychiatry* 2005;57:188–91.
601. Prasko J, Paskova B, Zalesky R, Novak T, Kopecek M, Bares M, et al. The effect of repetitive transcranial magnetic stimulation (rTMS) on symptoms in obsessive compulsive disorder. A randomized, double blind, sham controlled study. *Neuro Endocrinol Lett* 2006;27:327–32.
602. Pridmore S, Bruno R, Turnier-Shea Y, Reid P, Rybak M. Comparison of unlimited numbers of rapid transcranial magnetic stimulation (rTMS) and ECT treatment sessions in major depressive episode. *Int J Neuropsychopharmacol* 2000;3:129–34. Prikryl R, Kasperek T, Skotakova S, Ustohal L, Kucerovala H, Ceskova E. Treatment of negative symptoms of schizophrenia using repetitive transcranial magnetic stimulation in a double-blind, randomized controlled study. *Schizophr Res* 2007;95:151–7.
603. Prikryl R, Ustohal L, Prikrylova Kucerovala H, Kasperek T, Venclikova S, et al. A detailed analysis of the effect of repetitive transcranial magnetic stimulation on negative symptoms of schizophrenia: a double-blind trial. *Schizophr Res* 2013;149:167–73.
604. Prikryl R, Ustohal L, Kucerovala HP, Kasperek T, Jarkovsky J, Hublova V, et al. Repetitive transcranial magnetic stimulation reduces cigarette consumption in schizophrenia patients. *Prog Neuropsychopharmacol Biol Psychiatry* 2014;49:30–5.
605. Pripfl J, Tomova L, Rieckensky I, Lamm C. Transcranial magnetic stimulation of the left dorsolateral prefrontal cortex decreases cue-induced nicotine craving and EEG delta power. *Brain Stimul* 2014;7:226–33.
606. Rabey JM, Dobronevsky E, Aichenbaum S, Gonen O, Marton RG, Khaigrekht M. Repetitive transcranial magnetic stimulation combined with cognitive training is a safe and effective modality for the treatment of Alzheimer's disease: a randomized, double-blind study. *J Neural Transm* 2013;120:813–9.
607. Rachid F, Bertschy G. Safety and efficacy of repetitive transcranial magnetic stimulation in the treatment of depression: a critical appraisal of the last 10 years. *Neurophysiol Clin* 2006;36:157–83.
608. Ray S, Nizamie SH, Akhtar S, Praharaj SK, Mishra BR, Zia-ul-Haq M. Efficacy of adjunctive high frequency repetitive transcranial magnetic stimulation of left prefrontal cortex in depression: a randomized sham controlled study. *J Affect Disord* 2011;128:153–9.
609. Rektorova I, Sedlackova S, Telecka S, Hlubocky A, Rektor I. Dorsolateral prefrontal cortex: a possible target for modulating dyskinesias in Parkinson's disease by repetitive transcranial magnetic stimulation. *Int J Biomed Imaging* 2008;2008:372125.
610. Ren J, Li H, Palaniyappan L, Liu H, Wang J, Li C, et al. Repetitive transcranial magnetic stimulation versus electroconvulsive therapy for major depression: A systematic review and meta-analysis. *Prog Neuropsychopharmacol Biol Psychiatry* 2014;51:181–9.
611. Richieri R, Boyer L, Fariette J, Colavolpe C, Mundler O, Lancon C, et al. Predictive value of brain perfusion SPECT for rTMS response in pharmacoresistant depression. *Eur J Nucl Med Mol Imaging* 2011;38:1715–22.
612. Rizzo V, Siebner HR, Modugno N, Pesenti A, Munchau A, Gerschlagel W, et al. Shaping the excitability of human motor cortex with premotor rTMS. *J Physiol* 2004;554:483–95.

614. Rollnik JD, Huber TJ, Mogk H, Siggelkow S, Kropp S, Dengler R, et al. High frequency repetitive transcranial magnetic stimulation (rTMS) of the dorsolateral prefrontal cortex in schizophrenic patients. *Neuroreport* 2000;11:4013–5.
615. Rollnik JD, Wustefeld S, Dauper J, Karst M, Fink M, Kossev A, et al. Repetitive transcranial magnetic stimulation for the treatment of chronic pain – a pilot study. *Eur Neurol* 2002;48:6–10.
616. Rosa MA, Gattaz WF, Pascual-Leone A, Fregni F, Rosa MO, Rumi DO, et al. Comparison of repetitive transcranial magnetic stimulation and electroconvulsive therapy in unipolar non-psychotic refractory depression: a randomized, single-blind study. *Int J Neuropsychopharmacol* 2006;9:667–76.
617. Rose JE, McClernon J, Froeliger B, Behm FM, Preud'homme X, Krystal AD. Repetitive transcranial magnetic stimulation of the superior frontal gyrus modulates craving for cigarettes. *Biol Psychiatry* 2011;70:794–9.
618. Rossi S. Safety of transcranial magnetic stimulation: With a note on regulatory aspects. In: Miniussi C, Paulus W, Rossini PM, editors. *Transcranial brain stimulation*. Boca Raton, FL: CRC Press, Taylor & Francis Group; 2013. p. 415–26. Rossi S, Olivelli M, Bartalini S, Galli R, Passero S, Battistini N, et al. Reduction of cortical myoclonus-related epileptic activity following slow-frequency rTMS. *Neuroreport* 2004;15:293–6.
619. Rossi S, De Capua A, Olivelli M, Bartalini S, Falzarano V, Filippone G, et al. Effects of repetitive transcranial magnetic stimulation on chronic tinnitus: a randomised, crossover, double blind, placebo controlled study. *J Neurol Neurosurg Psychiatry* 2007a;78:857–63.
620. Rossi S, Ferro M, Cincotta M, Olivelli M, Bartalini S, Miniussi C, et al. A real electromagnetic placebo (REMP) device for sham transcranial magnetic stimulation (TMS). *Clin Neurophysiol* 2007b;118:709–16.
621. Rossi S, Hallett M, Rossini PM, Pascual-Leone A. Safety of TMS Consensus Group. Safety, ethical considerations, and application guidelines for the use of transcranial magnetic stimulation in clinical practice and research. *Clin Neurophysiol* 2009;120:2008–39.
622. Rossini D, Lucca A, Zanardi R, Magri L, Smeraldi E. Transcranial magnetic stimulation in treatment-resistant depressed patients: a double-blind, placebo-controlled trial. *Psychiatry Res* 2005a;137:1–10.
623. Rossini D, Magri L, Lucca A, Giordani S, Smeraldi E, Zanardi R. Does rTMS hasten the response to escitalopram, sertraline, or venlafaxine in patients with major depressive disorder? A double-blind, randomized, sham-controlled trial. *J Clin Psychiatry* 2005b;66:1569–75.
624. Rossini D, Lucca A, Magri L, Malaguti A, Smeraldi E, Colombo C, et al. A symptom-specific analysis of the effect of high-frequency left or low-frequency right transcranial magnetic stimulation over the dorsolateral prefrontal cortex in major depression. *Neuropsychobiology* 2010;62:91–7.
625. Rossini PM, Johnston CS. Facilitating acute stroke recovery with magnetic fields? *Neurology* 2005;65:353–4.
626. Rossini PM, Barker AT, Berardelli A, Caramia MD, Caruso G, Cracco RQ, et al. Non-invasive electrical and magnetic stimulation of the brain, spinal cord and roots: basic principles and procedures for routine clinical application. Report of an IFCN committee. *Electroencephalogr Clin Neurophysiol* 1994;91:79–92.

629. Rotenberg A, Depositarío-Cabacar D, Bae EH, Harini C, Pascual-Leone A, Takeoka M. Transient suppression of seizures by repetitive transcranial magnetic stimulation in a case of Rasmussen's encephalitis. *Epilepsy Behav* 2008;13: 260–2.
630. Rotenberg A, Bae EH, Muller PA, Riviello JJ, Bourgeois BF, Blum AS, et al. In-session seizures during low-frequency repetitive transcranial magnetic stimulation in patients with epilepsy. *Epilepsy Behav* 2009a;16:353–5.
631. Rotenberg A, Bae EH, Takeoka M, Tormos JM, Schachter SC, Pascual-Leone A. Repetitive transcranial magnetic stimulation in the treatment of epilepsia partialis continua. *Epilepsy Behav* 2009b;14:253–7.
632. Roth Y, Amir A, Levkovitz Y, Zangen A. Three-dimensional distribution of the electric field induced in the brain by transcranial magnetic stimulation using figure-8 and deep H-coils. *J Clin Neurophysiol* 2007;24:31–8.
633. Rothkegel H, Sommer M, Rammsayer T, Trenkwalder C, Paulus W. Training effects outweigh effects of single-session conventional rTMS and theta burst stimulation in PD patients. *Neurorehabil Neural Repair* 2009;23:373–81.
634. Rothkegel H, Sommer M, Paulus W. Breaks during 5 Hz rTMS are essential for facilitatory after effects. *Clin Neurophysiol* 2010;121:426–30.
635. Ruffini C, Locatelli M, Lucca A, Benedetti F, Insacco C, Smeraldi E. Augmentation effect of repetitive transcranial magnetic stimulation over the orbitofrontal cortex in drug-resistant obsessive-compulsive disorder patients: a controlled investigation. *Prim Care Companion J Clin Psychiatry* 2009;11:226–30.
636. Rumi DO, Gattaz WF, Rigonatti SP, Rosa MA, Fregni F, Rosa MO, et al. Transcranial magnetic stimulation accelerates the antidepressant effect of amitriptyline in severe depression: a double-blind placebo-controlled study. *Biol Psychiatry* 2005;57:162–6.
637. Ruohonen J, Karhu J. Navigated transcranial magnetic stimulation. *Neurophysiol Clin* 2010;40:7–17.
638. Sachdev PS, Loo CK, Mitchell PB, McFarquhar TF, Malhi GS. Repetitive transcranial magnetic stimulation for the treatment of obsessive compulsive disorder: a double-blind controlled investigation. *Psychol Med* 2007;37:1645–9.
639. Sallet S, Langlois M, Feddersen B, Minotti L, Vercueil L, Chabardes S, et al. Manipulating the epileptic brain using stimulation: a review of experimental and clinical studies. *Epileptic Disord* 2009;11:100–12.
640. Saitoh Y, Hirayama A, Kishima H, Oshino S, Hirata M, Kato A, et al. Stimulation of primary motor cortex for intractable deafferentation pain. *Acta Neurochir Suppl* 2006;99:57–9.
641. Saitoh Y, Hirayama A, Kishima H, Shimokawa T, Oshino S, Hirata M, et al. Reduction of intractable deafferentation pain due to spinal cord or peripheral lesion by high-frequency repetitive transcranial magnetic stimulation of the primary motor cortex. *J Neurosurg* 2007;107:555–9.
642. Sakai K, Ugawa Y, Terao Y, Hanajima R, Furubayashi T, Kanazawa I. Preferential activation of different I waves by transcranial magnetic stimulation with a figure-of-eight-shaped coil. *Exp Brain Res* 1997;113:24–32.
643. Salomons TV, Dunlop K, Kennedy SH, Flint A, Geraci J, Giacobbe P, et al. Resting-state cortico-thalamic-striatal connectivity predicts response to dorsomedial prefrontal rTMS in major depressive disorder. *Neuropsychopharmacology* 2014;39:488–98.

644. Salvador R, Miranda PC, Roth Y, Zangen A. High permeability cores to optimize the stimulation of deeply located brain regions using transcranial magnetic stimulation. *Phys Med Biol* 2009;54:3113–28.
645. Sampaio LA, Fraguas R, Lotufo PA, Benseñor IM, Brunoni AR. A systematic review of non-invasive brain stimulation therapies and cardiovascular risk: implications for the treatment of major depressive disorder. *Front Psychiatry* 2012;3:87.
646. Sampson SM, Rome JD, Rummans TA. Slow-frequency rTMS reduces fibromyalgia pain. *Pain Med* 2006;7:115–8.
647. Sampson SM, Kung S, McAlpine DE, Sandroni P. The use of slow-frequency prefrontal repetitive transcranial magnetic stimulation in refractory neuropathic pain. *J ECT* 2011;27:33–7.
648. Santiago-Rodriguez E, Cardenas-Morales L, Harmony T, Fernandez-Bouzas A, Porras-Kattz E, Hernandez A. Repetitive transcranial magnetic stimulation decreases the number of seizures in patients with focal neocortical epilepsy. *Seizure* 2008;17:677–83.
649. Sarkhel S, Sinha VK, Praharaj SK. Adjunctive high-frequency right prefrontal repetitive transcranial magnetic stimulation (rTMS) was not effective in obsessive-compulsive disorder but improved secondary depression. *J Anxiety Disord* 2010;24:535–9.
650. Sasaki N, Mizutani S, Kakuda W, Abo M. Comparison of the effects of high- and low-frequency repetitive transcranial magnetic stimulation on upper limb hemiparesis in the early phase of stroke. *J Stroke Cerebrovasc Dis* 2013;22:413–8.
651. Saur D, Hartwigsen G. Neurobiology of language recovery after stroke: lessons from neuroimaging studies. *Arch Phys Med Rehabil* 2012;93(1 (Suppl)):S15–25.
652. Schaffer CE, Davidson RJ, Saron C. Frontal and parietal electroencephalogram asymmetry in depressed and nondepressed subjects. *Biol Psychiatry* 1983;18: 753–62.
653. Schambra H, Sawaki L, Cohen LG. Modulation of excitability of human motor cortex (M1) by 1 Hz transcranial magnetic stimulation of the contralateral M1. *Clin Neurophysiol* 2003;114:130–3.
654. Schlee W, Weisz N, Bertrand O, Hartmann T, Elbert T. Using auditory steady state responses to outline the functional connectivity in the tinnitus brain. *PLoS One* 2008;3:e3720.
655. Schneider AL, Schneider TL, Stark H. Repetitive transcranial magnetic stimulation (rTMS) as an augmentation treatment for the negative symptoms of schizophrenia: a 4-week randomized placebo controlled study. *Brain Stimul* 2008;1:106–11.
656. Schneider SA, Pleger B, Draganski B, Cordivari C, Rothwell JC, Bhatia KP, et al. Modulatory effects of 5 Hz rTMS over the primary somatosensory cortex in focal dystonia—an fMRI-TMS study. *Mov Disord* 2010;25:76–83.
657. Schönfeldt-Lecuona C, Connemann BJ, Spitzer M, Herwig U. Transcranial magnetic stimulation in the reversal of motor conversion disorder. *Psychother Psychosom* 2003;72:286–8.
658. Schönfeldt-Lecuona C, Grön G, Walter H, Büchler N, Wunderlich A, Spitzer M, et al. Stereotaxic rTMS for the treatment of auditory hallucinations in schizophrenia. *Neuroreport* 2004;15:1669–73.
659. Schönfeldt-Lecuona C, Thielscher A, Freudenmann RW, Kron M, Spitzer M, Herwig U. Accuracy of stereotaxic positioning of transcranial magnetic stimulation. *Brain Topogr* 2005;17:253–9.
660. U. Accuracy of stereotaxic positioning of transcranial magnetic stimulation. *Brain Topogr* 2005;17:253–9.
661. Schönfeldt-Lecuona C, Connemann BJ, Viviani R, Spitzer M, Herwig U. Transcranial magnetic stimulation in motor conversion disorder: a short case series. *J Clin Neurophysiol* 2006;23:472–5.

662. Schönfeldt-Lecuona C, Cardenas-Morales L, Freudenmann RW, Kammer T, Herwig
663. U. Transcranial magnetic stimulation in depression—lessons from the multicentre trials. *Restor Neurol Neurosci* 2010a;28:569–76.
664. Schönfeldt-Lecuona C, Lefaucheur JP, Cardenas-Morales L, Wolf RC, Kammer T, Herwig U. The value of neuronavigated rTMS for the treatment of depression. *Neurophysiol Clin* 2010b;40:37–43.
665. Schönfeldt-Lecuona C, Cárdenas-Morales L, Moreno-Aguirre A, Dorn K, Langguth B, Brühl AB, et al. Effect of 1 Hz repetitive transcranial magnetic stimulation over the auditory cortex on audiometry and otoacoustic emissions. *Brain Topogr* 2012;25:241–7.
666. Schulze-Rauschenbach SC, Harms U, Schlaepfer TE, Maier W, Falkai P, Wagner M. Distinctive neurocognitive effects of repetitive transcranial magnetic stimulation and electroconvulsive therapy in major depression. *Br J Psychiatry* 2005;186:410–6.
667. Schutter DJ. Antidepressant efficacy of high-frequency transcranial magnetic stimulation over the left dorsolateral prefrontal cortex in double-blind sham- controlled designs: a meta-analysis. *Psychol Med* 2009;39:65–75.
668. Schutter DJ. Quantitative review of the efficacy of slow-frequency magnetic brain stimulation in major depressive disorder. *Psychol Med* 2010;40:1789–95.
669. Sedláčková S, Rektorová I, Srovnalová H, Rektor I. Effect of high frequency repetitive transcranial magnetic stimulation on reaction time, clinical features and cognitive functions in patients with Parkinson's disease. *J Neural Transm* 2009;116:1093–101.
670. Seniów J, Bilik M, Les'niak M, Waldowski K, Iwan' ski S, Członkowska A. Transcranial magnetic stimulation combined with physiotherapy in rehabilitation of
671. poststroke hemiparesis: a randomized, double-blind, placebo-controlled study. *Neurorehabil Neural Repair* 2012;26:1072–9.
672. Seniów J, Waldowski K, Les'niak M, Iwan' ski S, Czepiel W, Członkowska A. Transcranial magnetic stimulation combined with speech and language training in early aphasia rehabilitation: a randomized double-blind controlled pilot study. *Top Stroke Rehabil* 2013;20:250–61.
673. Shergill SS, Brammer MJ, Williams SC, Murray RM, McGuire PK. Mapping auditory hallucinations in schizophrenia using functional magnetic resonance imaging. *Arch Gen Psychiatry* 2000;57:1033–8.
674. Shi C, Yu X, Cheung EF, Shum DH, Chan RC. Revisiting the therapeutic effect of rTMS on negative symptoms in schizophrenia: A meta-analysis. *Psychiatry Res* 2014;215:505–13.
675. Shimamoto H, Takasaki K, Shigemori M, Imaizumi T, Ayabe M, Shoji H. Therapeutic effect and mechanism of repetitive transcranial magnetic stimulation in Parkinson's disease. *J Neurol* 2001;248(Suppl 3):III48–52.
676. Shindo K, Sugiyama K, Huabao L, Nishijima K, Kondo T, Izumi S. Long-term effect of low-frequency repetitive transcranial magnetic stimulation over the unaffected posterior parietal cortex in patients with unilateral spatial neglect. *J Rehabil Med* 2006;38:65–7.
677. Shirota Y, Ohtsu H, Hamada M, Enomoto H, Ugawa Y. Research Committee on rTMS Treatment of Parkinson's Disease. Supplementary motor area stimulation for Parkinson disease: a randomized controlled study. *Neurology* 2013;80: 1400–5.
678. Short EB, Borckardt JJ, Anderson BS, Frohman H, Beam W, Reeves ST, et al. Ten sessions of adjunctive left prefrontal rTMS significantly reduces fibromyalgia pain: a randomized, controlled pilot study. *Pain* 2011;152:2477–84.

679. Siebner HR, Rothwell J. Transcranial magnetic stimulation: new insights into representational cortical plasticity. *Exp Brain Res* 2003;148:1–16.
680. Siebner HR, Mentschel C, Auer C, Conrad B. Repetitive transcranial magnetic stimulation has a beneficial effect on bradykinesia in Parkinson's disease. *Neuroreport* 1999a;10:589–94.
681. Siebner HR, Tormos JM, Ceballos-Baumann AO, Auer C, Catala MD, Conrad B, et al. Low-frequency repetitive transcranial magnetic stimulation of the motor cortex in writer's cramp. *Neurology* 1999b;52:529–37.
682. Siebner HR, Mentschel C, Auer C, Lehner C, Conrad B. Repetitive transcranial magnetic stimulation causes a short-term increase in the duration of the cortical silent period in patients with Parkinson's disease. *Neurosci Lett* 2000a;284:147–50.
683. Siebner HR, Rossmeier C, Mentschel C, Peinemann A, Conrad B. Short-term motor improvement after sub-threshold 5-Hz repetitive transcranial magnetic stimulation of the primary motor hand area in Parkinson's disease. *J Neurol Sci* 2000b;178:91–4.
684. Siebner HR, Filipovic SR, Rowe JB, Cordivari C, Gerschlagel W, Rothwell JC, et al. Patients with focal arm dystonia have increased sensitivity to slow-frequency repetitive TMS of the dorsal premotor cortex. *Brain* 2003;126:2710–25.
685. Siebner HR, Lang N, Rizzo V, Nitsche MA, Paulus W, Lemon RN, et al. Preconditioning of low-frequency repetitive transcranial magnetic stimulation with transcranial direct current stimulation: evidence for homeostatic plasticity in the human motor cortex. *J Neurosci* 2004;24:3379–85.
686. Siebner H, Peller M, Lee L. TMS and positron emission tomography: methods and current advances. In: Wassermann E, Epstein C, Ziemann U, Walsh V, Paus T, Lisanby S, editors. *The Oxford Handbook of Transcranial Magnetic Stimulation*. Oxford: Oxford University Press; 2008. p. 549–67.
687. Silbersweig DA, Stern E, Frith C, Cahill C, Holmes A, Grooten S, et al. A functional neuroanatomy of hallucinations in schizophrenia. *Nature* 1995;378:176–9.
688. Silbert BI, Patterson HI, Pevic DD, Windnagel KA, Thickbroom GW. A comparison of relative-frequency and threshold-hunting methods to determine stimulus intensity in transcranial magnetic stimulation. *Clin Neurophysiol* 2013;124:708–12.
689. Slotema CW, Blom JD, Hoek HW, Sommer IE. Should we expand the toolbox of psychiatric treatment methods to include Repetitive Transcranial Magnetic Stimulation (rTMS)? A meta-analysis of the efficacy of rTMS in psychiatric disorders. *J Clin Psychiatry* 2010;71:873–84.
690. Slotema CW, Blom JD, de Weijer AD, Diederen KM, Goekoop R, Looijestijn J, et al. Can low-frequency repetitive transcranial magnetic stimulation really relieve medication-resistant auditory verbal hallucinations? Negative results from a large randomized controlled trial. *Biol Psychiatry* 2011;69:450–6.
691. Slotema CW, Aleman A, Daskalakis ZJ, Sommer IE. Meta-analysis of repetitive transcranial magnetic stimulation in the treatment of auditory verbal hallucinations: update and effects after one month. *Schizophr Res* 2012a;142:40–5.
692. Slotema CW, Blom JD, de Weijer AD, Hoek HW, Sommer IE. Priming does not enhance the efficacy of 1 Hertz repetitive transcranial magnetic stimulation for the treatment of auditory verbal hallucinations: results of a randomized controlled study. *Brain Stimul* 2012b;5:554–9.
693. Slotema CW, Blom JD, van Lutterveld R, Hoek HW, Sommer IE. Review of the efficacy of transcranial magnetic stimulation for auditory verbal hallucinations. *Biol Psychiatry* 2013. <http://dx.doi.org/10.1016/j.biopsych.2013.09.038>.

694. Sommer M, Kamm T, Tergau F, Ulm G, Paulus W. Repetitive paired-pulse transcranial magnetic stimulation affects corticospinal excitability and finger tapping in Parkinson's disease. *Clin Neurophysiol* 2002a;113:944–50.
695. Sommer M, Lang N, Tergau F, Paulus W. Neuronal tissue polarization induced by repetitive transcranial magnetic stimulation? *Neuroreport* 2002b;13: 809–11.
696. Sommer M, Alfaro A, Rummel M, Speck S, Lang N, Tings T, et al. Half sine, monophasic and biphasic transcranial magnetic stimulation of the human motor cortex. *Clin Neurophysiol* 2006;117:838–44.
697. Sommer M, Norden C, Schmack L, Rothkegel H, Lang N, Paulus W. Opposite optimal current flow directions for induction of neuroplasticity and excitation threshold in the human motor cortex. *Brain Stimul* 2013;6:363–70.
698. Song W, Du B, Xu Q, Hu J, Wang M, Luo Y. Low-frequency transcranial magnetic stimulation for visual spatial neglect: a pilot study. *J Rehabil Med* 2009;41:162–5.
699. Spagnolo F, Volonté MA, Fichera M, Chieffo R, Houdayer E, Bianco M, et al. Excitatory deep repetitive transcranial magnetic stimulation with H-coil as add-on treatment of motor symptoms in Parkinson's disease: an open label, pilot study. *Brain Stimul* 2014;7:297–300.
700. Speer AM, Kimbrell TA, Wassermann EM, Repella JD, Willis MW, Herscovitch P, et al. Opposite effects of high and low frequency rTMS on regional brain activity in depressed patients. *Biol Psychiatry* 2000;48:1133–41.
701. Speer AM, Benson BE, Kimbrell TK, Wassermann EM, Willis MW, Herscovitch P, et al. Opposite effects of high and low frequency rTMS on mood in depressed patients: relationship to baseline cerebral activity on PET. *J Affect Disord* 2009;115:386–94.
702. Srovnalova H, Marecek R, Rektorova I. The role of the inferior frontal gyri in cognitive processing of patients with Parkinson's disease: a pilot rTMS study. *Mov Disord* 2011;26:1545–8.
703. Srovnalova H, Marecek R, Kubikova R, Rektorova I. The role of the right dorsolateral prefrontal cortex in the Tower of London task performance: repetitive transcranial magnetic stimulation study in patients with Parkinson's disease. *Exp Brain Res* 2012;223:251–7.
704. Stern WM, Tormos JM, Press DZ, Pearlman C, Pascual-Leone A. Antidepressant effects of high and low frequency repetitive transcranial magnetic stimulation to the dorsolateral prefrontal cortex: a double-blind, randomized, placebo- controlled trial. *J Neuropsychiatry Clin Neurosci* 2007;19:179–86.
705. Strafella AP, Paus T, Barrett J, Dagher A. Repetitive transcranial magnetic stimulation of the human prefrontal cortex induces dopamine release in the caudate nucleus. *J Neurosci* 2001;21:RC157.
706. Strafella AP, Paus T, Fraraccio M, Dagher A. Striatal dopamine release induced by repetitive transcranial magnetic stimulation of the human motor cortex. *Brain* 2003;126:2609–15.
707. Strafella AP, Ko JH, Grant J, Fraraccio M, Monchi O. Corticostriatal functional interactions in Parkinson's disease: a rTMS/(11C)raclopride PET study. *Eur J Neurosci* 2005;22:2946–52.
708. Strafella AP, Ko JH, Monchi O. Therapeutic application of transcranial magnetic stimulation in Parkinson's disease: the contribution of expectation. *Neuroimage* 2006;31:1666–72.

709. Su TP, Huang CC, Wei IH. Add-on rTMS for medication-resistant depression: a randomized, double-blind, sham-controlled trial in Chinese patients. *J Clin Psychiatry* 2005;66:930–7.
710. Sun W, Fu W, Mao W, Wang D, Wang Y. Low-frequency repetitive transcranial magnetic stimulation for the treatment of refractory partial epilepsy. *Clin EEG Neurosci* 2011;42:40–4.
711. Sun W, Mao W, Meng X, Wang D, Qiao L, Tao W, et al. Low-frequency repetitive transcranial magnetic stimulation for the treatment of refractory partial epilepsy: a controlled clinical study. *Epilepsia* 2012;53:1782–9.
712. Sung WH, Wang CP, Chou CL, Chen YC, Chang YC, Tsai PY. Efficacy of coupling inhibitory and facilitatory repetitive transcranial magnetic stimulation to enhance motor recovery in hemiplegic stroke patients. *Stroke* 2013;44: 1375–82.
713. Szaflarski JP, Vannest J, Wu SW, DiFrancesco MW, Banks C, Gilbert DL. Excitatory repetitive transcranial magnetic stimulation induces improvements in chronic post-stroke aphasia. *Med Sci Monit* 2011;17. CR132–9.
714. Takekawa T, Kakuda W, Uchiyama M, Ikegaya M, Abo M. Brain perfusion and upper limb motor function: A pilot study on the correlation between evolution of asymmetry in cerebral blood flow and improvement in Fugl–Meyer Assessment score after rTMS in chronic post-stroke patients. *J Neuroradiol* 2013. [http:// dx.doi.org/10.1016/j.neurad.2013.06.006](http://dx.doi.org/10.1016/j.neurad.2013.06.006). in press.
715. Takeuchi N, Chuma T, Matsuo Y, Watanabe I, Ikoma K. Repetitive transcranial magnetic stimulation of contralesional primary motor cortex improves hand function after stroke. *Stroke* 2005;36:2681–6.
716. Takeuchi N, Tada T, Toshima M, Chuma T, Matsuo Y, Ikoma K. Inhibition of the unaffected motor cortex by 1 Hz repetitive transcranial magnetic stimulation enhances motor performance and training effect of the paretic hand in patients with chronic stroke. *J Rehabil Med* 2008;40:298–303.
717. Takeuchi N, Tada T, Toshima M, Matsuo Y, Ikoma K. Repetitive transcranial magnetic stimulation over bilateral hemispheres enhances motor function and training effect of paretic hand in patients after stroke. *J Rehabil Med* 2009;41:1049–54.
718. Talelli P, Greenwood RJ, Rothwell JC. Exploring Theta Burst Stimulation as an intervention to improve motor recovery in chronic stroke. *Clin Neurophysiol* 2007;118:333–42.
719. Talelli P, Wallace A, Dileone M, Hoad D, Cheeran B, Oliver R, et al. Theta burst stimulation in the rehabilitation of the upper limb: a semirandomized, placebo- controlled trial in chronic stroke patients. *Neurorehabil Neural Repair* 2012;26:976–87.
720. Tamura Y, Okabe S, Ohnishi T, N Saito D, Arai N, Mochio S, et al. Effects of 1-Hz repetitive transcranial magnetic stimulation on acute pain induced by capsaicin. *Pain* 2004;107:107–15.
721. Taylor JJ, Borckardt JJ, George MS. Endogenous opioids mediate left dorsolateral prefrontal cortex rTMS-induced analgesia. *Pain* 2012;153: 1219–25.
722. Taylor JJ, Borckardt JJ, Canterberry M, Li X, Hanlon CA, Brown TR, et al. Naloxone-Reversible Modulation of Pain Circuitry by Left Prefrontal rTMS. *Neuropsychopharmacology* 2013;38:1189–97.
723. Taylor JL, Loo CK. Stimulus waveform influences the efficacy of repetitive transcranial magnetic stimulation. *J Affect Disord* 2007;97:271–6.

724. Teepker M, Hötzel J, Timmesfeld N, Reis J, Mylius V, Haag A, et al. Low-frequency rTMS of the vertex in the prophylactic treatment of migraine. *Cephalalgia* 2010;30:137–44.
725. Tergau F, Naumann U, Paulus W, Steinhoff BJ. Low-frequency repetitive transcranial magnetic stimulation improves intractable epilepsy. *Lancet* 1999;353:2209.
726. Tergau F, Neumann D, Rosenow F, Nitsche MA, Paulus W, Steinhoff B. Can epilepsies be improved by repetitive transcranial magnetic stimulation? Interim analysis of a controlled study. *Suppl Clin Neurophysiol* 2003;56:400–5.
727. Theilig S, Podubecka J, Bosl K, Wiederer R, Nowak DA. Functional neuromuscular stimulation to improve severe hand dysfunction after stroke: does inhibitory rTMS enhance therapeutic efficiency? *Exp Neurol* 2011;230:149–55.
728. Theodore WH, Hunter K, Chen R, Vega-Bermudez F, Boroojerdi B, Reeves-Tyer P, et al. Transcranial magnetic stimulation for the treatment of seizures. *Neurology* 2002;59:560–2.
729. Thiel A, Hartmann A, Rubi-Fessen I, Anglade C, Kracht L, Weiduschat N, et al. Effects of noninvasive brain stimulation on language networks and recovery in early poststroke aphasia. *Stroke* 2013;44:2240–6.
730. Thielscher A, Kammer T. Electric field properties of two commercial figure-8 coils in TMS: calculation of focality and efficiency. *Clin Neurophysiol* 2004;115: 1697–708.
731. Thordstein M, Constantinescu R. Possibly lifesaving, noninvasive, EEG-guided neuromodulation in anesthesia-refractory partial status epilepticus. *Epilepsy Behav* 2012;25:468–72.
732. Torrance N, Smith BH, Bennett MI, Lee AJ. The epidemiology of chronic pain of predominantly neuropathic origin. Results from a general population survey. *J Pain* 2006;7:281–9.
733. Touge T, Gerschlagel W, Brown P, Rothwell JC. Are the after-effects of low-frequency rTMS on motor cortex excitability due to changes in the efficacy of cortical synapses? *Clin Neurophysiol* 2001;112:2138–45.
734. Tranulis C, Sepehry AA, Galinowski A, Stip E. Should we treat auditory hallucinations with repetitive transcranial magnetic stimulation? A meta-analysis. *Can J Psychiatry* 2008;53:577–86.
735. Traversa R, Cicinelli P, Pasqualetti P, Filippi M, Rossini PM. Follow-up of interhemispheric differences of motor evoked potentials from the 'affected' and 'unaffected' hemispheres in human stroke. *Brain Res* 1998;803:1–8.
736. Triggs WJ, Ricciuti N, Ward HE, Cheng J, Bowers D, Goodman WK, et al. Right and left dorsolateral pre-frontal rTMS treatment of refractory depression: a randomized, sham-controlled trial. *Psychiatry Res* 2010;178:467–74.
737. Tringali S, Perrot X, Collet L, Moulin A. Repetitive transcranial magnetic stimulation: hearing safety considerations. *Brain Stimul* 2012;5:354–63.
738. Tsai PY, Wang CP, Ko JS, Chung YM, Chang YW, Wang JX. The persistent and broadly modulating effect of inhibitory rTMS in nonfluent aphasic patients: a sham-controlled, double-blind study. *Neurorehabil Neural Repair* 2014. <http://dx.doi.org/10.1177/1545968314522710>. in press.
739. Tsubokawa T, Katayama Y, Yamamoto T, Hirayama T, Koyama S. Chronic motor cortex stimulation for the treatment of central pain. *Acta Neurochir Suppl (Wien)* 1991;52:137–9.
740. Turrigiano GG, Nelson SB. Homeostatic plasticity in the developing nervous system.
741. *Nat Rev Neurosci* 2004;5:97–107.

742. Van der Eynde F, Claudino A, Mogg A, Horrell L, Stahl D, Ribeiro W, et al. Repetitive transcranial magnetic stimulation reduces cue-induced food craving in bulimic disorders. *Biol Psychiatry* 2010;67:793–5.
743. van Dijk KD, Møst EI, Van Someren EJ, Berendse HW, van der Werf YD. Beneficial effect of transcranial magnetic stimulation on sleep in Parkinson's disease. *Mov Disord* 2009;24:878–84.
744. Vanneste S, De Ridder D. Differences between a single session and repeated sessions of 1 Hz TMS by double-cone coil prefrontal stimulation for the improvement of tinnitus. *Brain Stimul* 2013;6:155–9.
745. Vanneste S, Plazier M, Van de Heyning P, De Ridder D. Repetitive transcranial magnetic stimulation frequency dependent tinnitus improvement by double cone coil prefrontal stimulation. *J Neurol Neurosurg Psychiatry* 2011;82:1160–4.
746. Vercammen A, Knegtering H, Bruggeman R, Westenbroek HM, Jenner JA, Slooff CJ, et al. Effects of bilateral repetitive transcranial magnetic stimulation on treatment resistant auditory-verbal hallucinations in schizophrenia: a randomized controlled trial. *Schizophr Res* 2009;114:172–9.
747. Vuksanovic J, Jelic MB, Milanovic SD, Kačar K, Konstantinovic L, Filipovic SR. Improvement of language functions in a chronic non-fluent post-stroke aphasic patient following bilateral sequential theta burst magnetic stimulation. *Neurocase* 2014. <http://dx.doi.org/10.1080/13554794.2014.890731>. in press.
748. Wagle-Shukla A, Angel MJ, Zadikoff C, Enjati M, Gunraj C, Lang AE, et al. Low- frequency repetitive transcranial magnetic stimulation for treatment of levodopa-induced dyskinesias. *Neurology* 2007;68:704–5.
749. Wagner T, Gangitano M, Romero R, Théoret H, Kobayashi M, Ansel D, et al. Intracranial measurement of current densities induced by transcranial magnetic stimulation in the human brain. *Neurosci Lett* 2004;354:91–4.
750. Waldowski K, Seniów J, Les'niak M, Iwan' ski S, Członkowska A. Effect of low-frequency repetitive transcranial magnetic stimulation on naming abilities in early-stroke aphasic patients: a prospective, randomized, double-blind sham- controlled study. *ScientificWorldJournal* 2012;2012:518568.
751. Wang CP, Tsai PY, Yang TF, Yang KY, Wang CC. Differential effect of conditioning sequences in coupling inhibitory/facilitatory repetitive transcranial magnetic stimulation for poststroke motor recovery. *CNS Neurosci Ther* 2014;20: 355–63.
752. Wang RY, Tseng HY, Liao KK, Wang CJ, Lai KL, Yang YR. rTMS combined with task-oriented training to improve symmetry of interhemispheric corticomotor excitability and gait performance after stroke: a randomized trial. *Neurorehabil Neural Repair* 2012;26:222–30.
753. 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;108:1–16.
754. Watts BV, Landon B, Graft A, Young-Xu Y. A sham controlled study of repetitive transcranial magnetic stimulation for posttraumatic stress disorder. *Brain Stimul* 2012;5:38–43.
755. Weiduschat N, Thiel A, Rubi-Fessen I, Hartmann A, Kessler J, Merl P, et al. Effects of repetitive transcranial magnetic stimulation in aphasic stroke: a randomized controlled pilot study. *Stroke* 2011;42:409–15.

756. 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. *Electroencephalogr Clin Neurophysiol* 1996;101:58–66.
757. Wilson SJ, Sayette MA, Fiez JA. Prefrontal responses to drug cues: a neurocognitive analysis. *Nat Neurosci* 2004;7:211–4.
758. Winhuisen L, Thiel A, Schumacher B, Kessler J, Rudolf J, Haupt WF, et al. Role of the contralateral inferior frontal gyrus in recovery of language function in poststroke aphasia: a combined repetitive transcranial magnetic stimulation and positron emission tomography study. *Stroke* 2005;36:1759–63.
759. Wong IS, Tsang HW. A review on the effectiveness of repetitive transcranial magnetic stimulation (rTMS) on post-stroke aphasia. *Rev Neurosci* 2013;24:105–14.
760. Wu AD, Fregni F, Simon DK, Deblieck C, Pascual-Leone A. Noninvasive brain stimulation for Parkinson's disease and dystonia. *Neurotherapeutics* 2008;5:345–61.
761. Wu T, Sommer M, Tergau F, Paulus W. Lasting influence of repetitive transcranial magnetic stimulation on intracortical excitability in human subjects. *Neurosci Lett* 2000;287:37–40.
762. Xia G, Gajwani P, Muzina DJ, Kemp DE, Gao K, Ganocy SJ, et al. Treatment-emergent mania in unipolar and bipolar depression: focus on repetitive transcranial magnetic stimulation. *Int J Neuropsychopharmacol* 2008;11:119–30.
763. Xie J, Chen J, Wei Q. Repetitive transcranial magnetic stimulation versus electroconvulsive therapy for major depression: a meta-analysis of stimulus parameter effects. *Neurol Res* 2013;35:1084–91.
764. Yamada N, Kakuda W, Kondo T, Shimizu M, Mitani S, Abo M. Bihemispheric repetitive transcranial magnetic stimulation combined with intensive occupational therapy for upper limb hemiparesis after stroke: a preliminary study. *Int J Rehabil Res* 2013;36:323–9.
765. Yang NY, Zhou D, Chung RC, Li-Tsang CW, Fong KN. Rehabilitation interventions for unilateral neglect after stroke: a systematic review from 1997 through 2012. *Front Hum Neurosci* 2013a;7:187.
766. Yang YR, Tseng CY, Chiou SY, Liao KK, Cheng SJ, Lai KL, et al. Combination of rTMS and treadmill training modulates corticomotor inhibition and improves walking in Parkinson disease: a randomized trial. *Neurorehabil Neural Repair* 2013b;27:79–86.
767. Yukimasa T, Yoshimura R, Tamagawa A, Uozumi T, Shinkai K, Ueda N, et al. High-frequency repetitive transcranial magnetic stimulation improves refractory depression by influencing catecholamine and brain-derived neurotrophic factors. *Pharmacopsychiatry* 2006;39:52–9.
768. Zanardini R, Gazzoli A, Ventriglia M, Perez J, Bignotti S, Rossini PM, et al. Effect of repetitive transcranial magnetic stimulation on serum brain derived neurotrophic factor in drug resistant depressed patients. *J Affect Disord* 2006;91:83–6.
769. Zanette G, Forgiione A, Manganotti P, Fiaschi A, Tamburin S. The effect of repetitive transcranial magnetic stimulation on motor performance, fatigue and quality of life in amyotrophic lateral sclerosis. *J Neurol Sci* 2008;270:18–22.
770. Ziemann U. TMS induced plasticity in human cortex. *Rev Neurosci* 2004;15: 253–66.
771. Ziemann U, Paulus W, Rothenberger A. Decreased motor inhibition in Tourette's disorder: evidence from transcranial magnetic stimulation. *Am J Psychiatry* 1997;154:1277–84.
772. Ziemann U, Paulus W, Nitsche MA, Pascual-Leone A, Byblow WD, Berardelli A, et al. Consensus: motor cortex plasticity protocols. *Brain Stimul* 2008;1: 164–82.

773. Zunhammer M, Busch V, Griesbach F, Landgrebe M, Hajak G, Langguth B. rTMS over the cerebellum modulates temperature detection and pain thresholds through peripheral mechanisms. *Brain Stimul* 2011;4:210–7.
774. Zwanzger P, Fallgatter AJ, Zavorotnyy M, Padberg F. Anxiolytic effects of transcranial magnetic stimulation—an alternative treatment option in anxiety disorders? *J Neural Transm* 2009;116:767–75.