

- 26 Yatham LN, Kennedy SH, O'Donovan C, Parikh S, MacQueen G, McIntyre R, et al. Canadian Network for Mood and Anxiety Treatments. Canadian Network for Mood and Anxiety Treatments (CANMAT) guidelines for the management of patients with bipolar disorder: consensus and controversies. *Bipolar Disord* 2005; **7** (suppl 3): 5–39.
- 27 Yatham LN, Kennedy SH, O'Donovan C, Parikh SV, MacQueen G, McIntyre RS, et al. Canadian Network for Mood and Anxiety Treatments (CANMAT) guidelines for the management of patients with bipolar disorder: update 2007. *Bipolar Disord* 2006; **8**: 721–39.
- 28 Yatham LN, Kennedy SH, Schaffer A, Parikh SV, Beaulieu S, O'Donovan C, et al. Canadian Network for Mood and Anxiety Treatments (CANMAT) and International Society for Bipolar Disorder (ISBD) collaborative update of CANMAT guidelines for the management of patients with bipolar disorder: update 2009. *Bipolar Disord* 2009; **11**: 225–55.
- 29 Robbins TW, James M, Owen AM, Sahakian BJ, McInnes L, Rabbitt P. Cambridge neuropsychological test automated battery (CANTAB): a factor analytic study of a large sample of normal elderly volunteers. *Dementia* 1994; **5**: 266–81.
- 30 Sweeney JA, Kmiec JA, Kupfer DJ. Neuropsychologic impairments in bipolar and unipolar mood disorders on the CANTAB neurocognitive battery. *Biol Psychiatry* 2000; **48**: 674–84.
- 31 Olley AL, Malhi GS, Bachelor J, Cahill CM, Mitchell PB, Berk M. Executive functioning and theory of mind in euthymic bipolar disorder. *Bipolar Disord* 2005; **7** (suppl 5): 43–52.
- 32 Nuechterlein KH, Green MF, Kern RS, Baade LE, Barch DM, Cohen JD, et al. The MATRICS consensus cognitive battery, part 1: Test selection, reliability, and validity. *Am J Psychiatry* 2008; **165**: 203–13.
- 33 Yatham LN, Torres IJ, Malhi GS, Frangou S, Glahn DC, Bearden CE, et al. The International Society for Bipolar Disorder-Battery for Assessment of Neurocognition (ISBD-BANC). *Bipolar Disord* 2010; **12**: 351–63.
- 34 Burdick KE, Goldberg TE, Cornblatt BA, Keefe RS, Gopin CB, Derosse P, et al. The MATRICS consensus cognitive battery in patients with bipolar I disorder. *Neuropsychopharmacology* 2011; **36**: 1587–92.
- 35 Torres IJ, Kozicky J, Popuri S, Bond DJ, Honer WG, Lam RW, et al. 12-month longitudinal cognitive functioning in patients recently diagnosed with bipolar disorder. *Bipolar Disord* 2013; 25 Nov, epub ahead of print.
- 36 Nehra R, Chakrabarti S, Pradhan BK, Khehra N. Comparison of cognitive functions between first- and multi-episode bipolar affective disorders. *J Affect Disord* 2006; **93**: 185–92.
- 37 Gruber SA, Rosso IM, Yurgelun-Todd D. Neuropsychological performance predicts clinical recovery in bipolar patients. *J Affect Disord* 2008; **105**: 253–60.
- 38 Lee RSC, Hermens DF, Porter M, Redoblado-Hodge MA. A meta-analysis of cognitive deficits in first-episode major depressive disorder. *J Affect Disord* 2012; **140**: 113–24.
- 39 Wekking EM, Bockting CLH, Koeter MWJ, Schene AH. Cognitive functioning in euthymic recurrently depressed patients: relationship with future relapses and prior course of disease. *J Affect Disord* 2012; **141**: 300–7.
- 40 Bora E, Yucel M, Pantelis C. Cognitive endophenotypes of bipolar disorder: a meta-analysis of neuropsychological deficits in euthymic patients and their first-degree relatives. *J Affect Disord* 2009; **113**: 1–20.
- 41 Hasselbalch BJ, Knorr U, Hasselbalch SG, Gade A, Kessing LV. The cumulative load of depressive illness is associated with cognitive function in the remitted state of unipolar depressive disorder. *Eur Psychiatry* 2012; **28**: 349–55.
- 42 MacQueen G, Frodl T. The hippocampus in major depression: evidence for the convergence of the bench and bedside in psychiatric research? *Mol Psychiatry* 2011; **16**: 252–64.
- 43 Gurden H, Tassin JP, Jay TM. Integrity of the mesocortical dopaminergic system is necessary for complete expression of in vivo hippocampal-prefrontal cortex long-term potentiation. *Neuroscience* 1999; **94**: 1019–27.
- 44 McKinnon MC, Yucel K, Nizarov A, MacQueen GM. A meta-analysis examining clinical predictors of hippocampal volume in patients with major depressive disorder. *J Psychiatry Neurosci* 2009; **34**: 41–54.
- 45 Rao U, Chen LA, Bidesi AS, Shad MU, Thomas MA, Hammen CL. Hippocampal changes associated with early-life adversity and vulnerability to depression. *Biol Psychiatry* 2010; **67**: 357–64.
- 46 Frey BN, Andreazza AC, Nery FG, Martins MR, Quevedo J, Soares JC, et al. The role of hippocampus in the pathophysiology of bipolar disorder. *Behav Pharmacol* 2007; **18**: 419–30.
- 47 Chepenik LG, Wang F, Spencer L, Spann M, Kalmar JH, Womer F, et al. Structure-function associations in hippocampus in bipolar disorder. *Biol Psychol* 2012; **90**: 18–22.
- 48 Gourovitch ML, Torrey EF, Gold JM, Randolph C, Weinberger DR, Goldberg TE. Neuropsychological performance of monozygotic twins discordant for bipolar disorder. *Biol Psychiatry* 1999; **45**: 639–46.
- 49 Kéri S, Kelemen O, Benedek G, Janka Z. Different trait markers for schizophrenia and bipolar disorder: a neurocognitive approach. *Psychol Med* 2001; **31**: 915–22.
- 50 Balanzá-Martínez V, Rubio C, Selva-Vera G, Martínez-Aran A, Sánchez-Moreno J, Salazar-Fraile J, et al. Neurocognitive endophenotypes (endophenocognotypes) from studies of relatives of bipolar disorder subjects: a systematic review. *Neurosci Biobehav Rev* 2008; **32**: 1426–38.
- 51 Hasselbalch BJ, Knorr U, Kessing LV. Cognitive impairment in the remitted state of unipolar depressive disorder: a systematic review. *J Affect Disord* 2011; **134**: 20–31.
- 52 Dias VV, Balanzá-Martínez V, Soeiro-de-Souza MG, Moreno RA, Figueira ML, Machado-Vieira R, et al. Pharmacological approaches in bipolar disorder and the impact on cognition: a critical overview. *Acta Psychiatr Scand* 2012; **126**: 315–31.

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words

Randomised controlled trials

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A randomised controlled trial (RCT) is an experiment in which the outcomes are compared between participants who have been allocated to comparator treatments or interventions unpredictably and randomly. Properly done, an RCT provides a fair test of treatments, avoiding bias due to treatment selection according to initial patient characteristics. Masking minimises biases due to clinical management or outcome assessment being influenced by the allocated treatment. Including all randomised patients in the analysis avoids bias due to differential drop-out. The trick for the trialist is to ensure that all this control does not make the results unusable in the real world.

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