Depression is a common and important consequence of stroke that impacts on recovery, yet we do little to prevent its development. Little is known about whether treatments started early after stroke will reduce the risk of developing depressive symptoms. This is an update of a Cochrane review we first published in 2004 to determine whether pharmaceutical or psychological interventions can prevent depression and improve physical and psychological outcomes in patients with stroke.1

Search Strategy
We searched the trials registers of the Cochrane Stroke Group (last searched October 2007) and the Cochrane Depression Anxiety and Neurosis Group (last searched February 2008). In addition, we searched the Cochrane Central Register of Controlled Trials (The Cochrane Library, Issue 1, 2008), MEDLINE (1966 to May 2006), EMBASE (1980 to May 2006), CINAHL (1982 to May 2006), PsycINFO (1967 to May 2006), and other databases. We also searched reference

Figure. Psychological interventions versus standard care (or attention control): meeting study criteria for depression at the end of treatment.2,3
lists, clinical trials registers, conference proceedings, and dissertation abstracts, and contacted authors, researchers, and pharmaceutical companies.

Selection Criteria
We considered all truly randomized controlled trials comparing pharmaceutical agents with placebo, or psychotherapy against standard care (or attention control) to prevent depression in patients with stroke.

Results
We identified fourteen trials involving 1515 participants at entry. Data were available for 10 pharmaceutical trials (12 comparisons) and 4 psychotherapy trials. The time from stroke to entry into a trial ranged from a few hours to 7 months, but most patients were recruited within 1 month of acute stroke. The duration of treatments ranged from 2 weeks to 1 year.

A statistically significant improvement in mood (weighted mean difference $-1.37; 95\%$ confidence interval $-2.33$ to $-0.4$) and the prevention of depression (odds ratio $0.64, 95\%$ confidence interval $0.42$ to $0.98$, See Figure) was evident for psychotherapy, but the treatment effects were small and did not improve other outcomes.

There is no evidence of efficacy of antidepressants preventing depression or improving physical recovery.

Discussion
The addition of 3 new psychotherapy trials since 2004 has altered previous findings to show a small but significant effect of psychotherapy on improving mood and preventing depression. This probably endorses the use of more structured approaches to the use of education, advice, and problem solving targeting emotional recovery and adjustment to the effects of stroke. However, more evidence is required before recommendations can be made about the routine use of such treatments after stroke as only a small proportion of stroke survivors are eligible to participate in these clinical trials. With the addition of 1 new pharmacotherapy trial there is no evidence of efficacy of antidepressants for preventing depression and the treatment trials indicate the risk of adverse events. Antidepressants and psychostimulants should not be used to prevent depression after stroke.

There is a need for further research using more rigorous methods including concealment of randomization, and blinded treatment allocation and outcome assessments. Future trials to prevent depression after stroke should be of adequate power, include participants recruited within 4 to 6 weeks of the onset of stroke, clearly identify a priori primary and secondary end points, and include prospective assessment and complete reporting of adverse events. Any preventative strategy should be continued for at least 6 months to allow the maximum effect on the natural history of the disorder.

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References

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