# PHARMACOLOGICAL INTERVENTIONS FOR DEPRESSION IN ADULTS WITH END-STAGE KIDNEY DISEASE

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## Background

Depression affects approximately one quarter of people treated with dialysis[1] and is considered an important research uncertainty by patients and health professionals. Treatment for depression in dialysis patients may have different benefits and harms due to impaired clearance of antidepressant medication and the severity of somatic symptoms associated with end-stage kidney disease. Guidelines suggest treatment of depression in dialysis patients with pharmacological therapy, preferably a serotonin receptor reuptake inhibitor[2] (SSRI).
The aim of this systematic review was to assess the efficacy and safety of pharmacological therapy in the treatment of depression in patients who have end-stage kidney disease treated with dialysis.

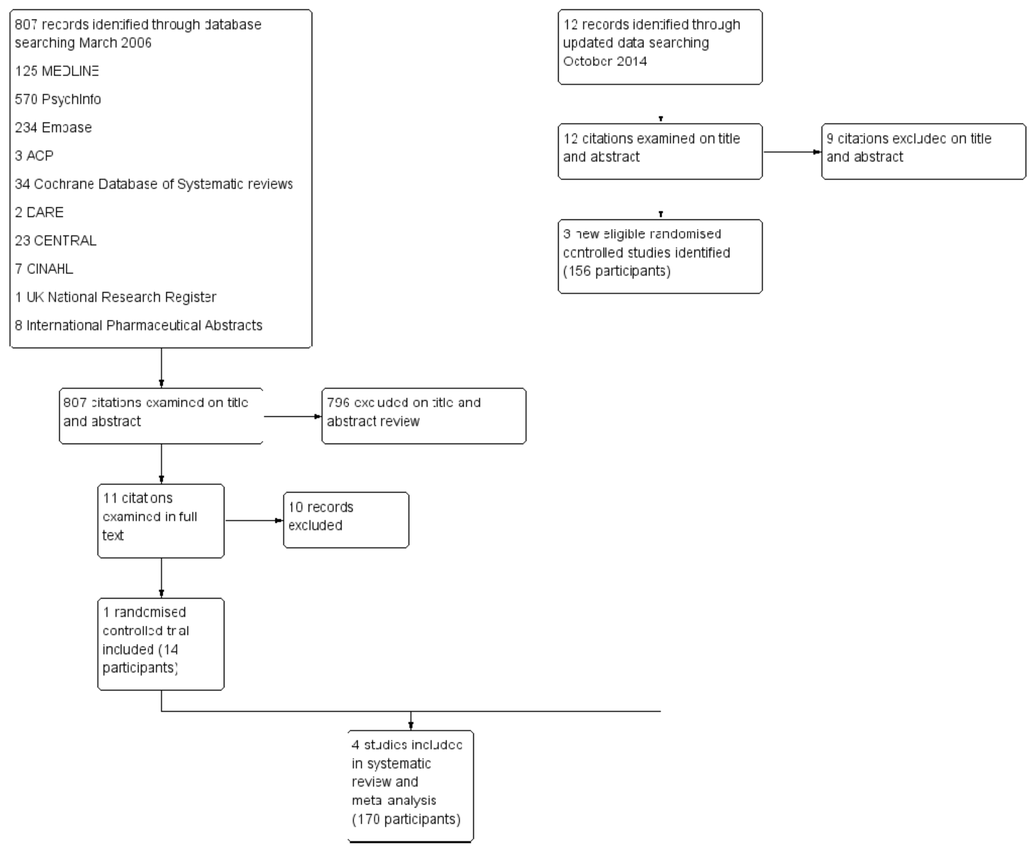
## Methods

We searched the Cochrane Renal Group's Specialized Register to 7 October 2014 through contact with the Trials' Search Coordinator using search terms relevant to this review. We included randomized controlled trials (RCTs) comparing drugs with placebo or no treatment, or compared to another anti-depressant medication.
Data were abstracted by two investigators independently onto a standard form and subsequently entered into Review Manager. Risk ratios (RR) for dichotomous data and mean differences (MD) for continuous data were calculated with 95% confidence intervals (95% CI).

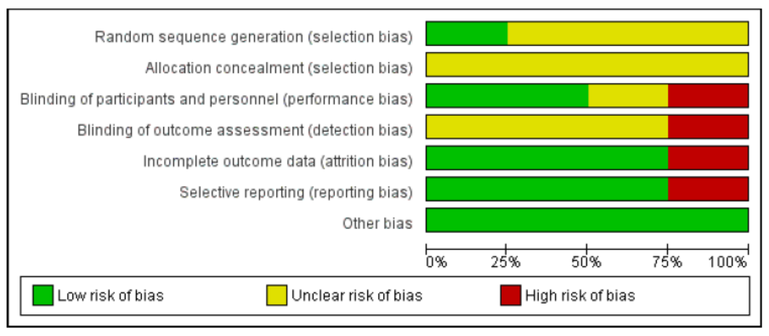
## Results

A search was conducted in October 2014 to update the review **(Figure 1)**. Four studies in 170 participants compared antidepressant therapy (fluoxetine, sertraline, citalopram or escitalopram) versus placebo or psychological training for 8 to 12 weeks.
The risk of bias for many domains was generally unclear or high **(Figure 2)**.
Compared to placebo, antidepressant therapy had no evidence of benefit on quality of life, uncertain adverse effects (hypotension (RR 1.72, 0.75 to 3.92), headache (RR 2.91, 0.73 to 11.6), sexual dysfunction (RR 3.83, 0.63 to 23.3), and increased nausea (RR 2.67, 1.26 to 5.68), **Figure 3**). There were few or no data for hospitalization, suicide or all-cause mortality resulting in inconclusive evidence. Antidepressant therapy may reduce depression scores during treatment compared to placebo (MD -7.50, -11.9 to -3.06). Antidepressant therapy was not statistically different from group psychological therapy for effects on depression scores or withdrawal from treatment and a range of other outcomes were not measured.

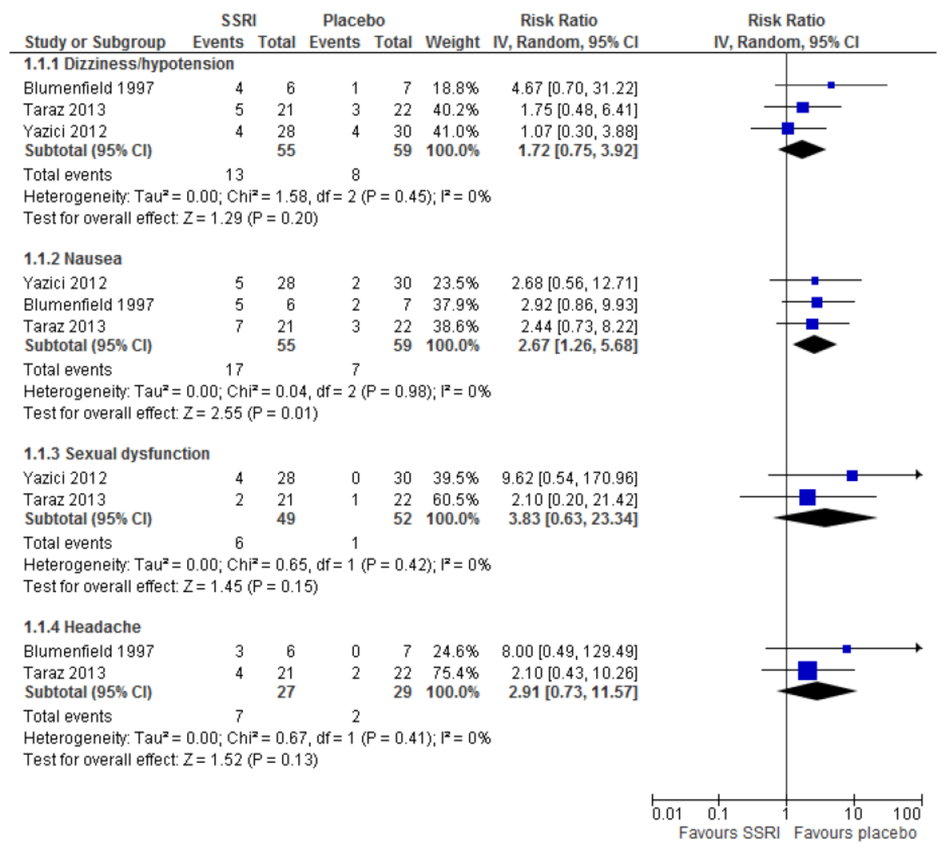
### Figure 1. Flow chart for identification of included studies




### Figure 2. Risk of bias of included studies




### Figure 3. Adverse events




## Conclusion

Despite the high prevalence of depression in dialysis patients and the relative priority patients place on effective treatments, evidence for anti-depressant medication in the dialysis setting is sparse and data are generally inconclusive. The relative benefits and harms of antidepressant therapy are poorly known and large randomized studies of antidepressants versus placebo are required.

*References:*
1. *Palmer S, Vecchio M, Craig JC, Tonelli M, Johnson DW, Nicolucci A, Pellegrini F, Saglimbene V, Logroscino G, Fishbane S, Strippoli GF. Prevalence of depression in chronic kidney disease: systematic review and meta-analysis of observational studies. Kidney Int 2013;84(1):179–91.2.*
2. *Nagler EV, Webster AC, Vanholder R, Zoccali C. Antidepressants for depression in stage 3-5 chronic kidney disease: a systematic review of pharmacokinetics, efficacy and safety with recommendations by European Renal Best Practice (ERBP). Nephrology, dialysis, transplantation : official publication of the European Dialysis and Transplant Association - European Renal Association 2012;27(10): 3736–45. [PUBMED: 22859791]*

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