

### What is already known on this topic

Selective serotonin reuptake inhibitor (SSRI) antidepressants are effective treatments for depression and other psychological disorders in adults

Recent evidence from randomised controlled trials indicates that SSRIs may increase the risk of self harm and suicidal thoughts in children and adolescents

### What this study adds

Combined evidence from placebo controlled RCTs of SSRIs in adults cannot rule out either an important beneficial or harmful effect of SSRIs on suicide deaths

There is some evidence of an increased risk of non-fatal self harm in adults treated with SSRIs but no evidence of an increased risk of suicidal thoughts

The duration of most trials included in this review is too short to assess whether short term risks are offset by longer term benefits

products make assessment of heterogeneity difficult. Fourthly, some relevant trial data are likely to have been excluded from this analysis as we did not carry out a systematic review of the published literature, and independent researchers are likely to present a less favourable picture of drug side effects. Fifthly, there is suggestive evidence that non-fatal self harm and suicidal thoughts were under-recorded. Lastly, most of the randomised controlled trials were less than 10 weeks, and so possible longer term beneficial effects of SSRIs will not have been detected.

### Previous studies

The magnitudes of the risks of suicide and non-fatal self harm among adults are consistent with the findings in children and adolescents (odds ratio 1.66, 95% credible interval 0.83 to 3.50).<sup>1</sup> In Beasley's meta-analysis,<sup>5</sup> in keeping with our analysis, adults treated with paroxetine reported fewer suicidal thoughts than patients treated with placebo.

Observational studies based on the UK's General Practice Research Database (GPRD) have not compared risks in treated and untreated patients (see additional references on [bmj.com](http://bmj.com) and the study by Martinez et al on page 389 of this issue). Ecological studies comparing time trends in antidepressant prescribing with population suicide rates in several different countries provide no consistent evidence that recent increases in prescribing have been associated with adverse trends in suicide.<sup>1</sup>

### Implications for public health and clinical practice

SSRIs are effective treatments for adult depression and are better tolerated by patients than the tricyclic antidepressants. However, our meta-analysis indicates that it is possible, in the early weeks of treatment, that SSRIs are associated with an increased risk of suicidal behaviour. Meta-analyses of placebo controlled trials of antidepressants in adults indicate that the number of

patients who need to be treated with an SSRI (fluoxetine) to get one response is four to seven.<sup>8</sup> Conversely, our data for non-fatal self harm indicate that the best estimate of the number needed to treat to harm is 759. The balance may be less favourable in people with mild depression, where the effectiveness of SSRIs is unclear.<sup>9</sup>

In the trials submitted to the MHRA's recent review no clear evidence was found of differences in risk between different classes of antidepressants,<sup>7</sup> indicating that any increases in risk are likely to be common to all antidepressants.

### Conclusion

Research is urgently needed both to clarify appropriate indications for the use of SSRIs and to determine whether it is possible to identify people at risk of possible suicidal side effects. In the meantime patients starting treatment with these drugs, as well as their carers, should be counselled about these possible side effects.

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### Endpiece

#### A wish

Nor bring, to see me cease to live, Some doctor full of phrase and fame, To shake his sapient head and grieve The ill he cannot cure a name.

Matthew Arnold (1822-88), English critic and poet  
Fred Charatan, retired geriatric physician, Florida