

# Review: Selective serotonin reuptake inhibitors reduce symptoms in the premenstrual syndrome

Dimmock PW, Wyatt KM, Jones PW, O'Brien PM. Efficacy of selective serotonin-reuptake inhibitors in premenstrual syndrome: a systematic review. *Lancet*. 2000 Sep 30;356:1131-6.

## QUESTION

In women with severe premenstrual syndrome (PMS), are selective serotonin reuptake inhibitors (SSRIs) effective?

## DATA SOURCES

Studies were identified by searching MEDLINE (1966 to 1999), EMBASE/Excerpta Medica (1988 to 1998), PsycLIT (1974 to 1997), CINAHL (1982 to 1999), and the Cochrane Controlled Trials Register database; scanning the reference lists of identified articles; and contacting the manufacturers of SSRIs.

## STUDY SELECTION

Studies were selected if they were randomized, double-blind, placebo-controlled trials investigating SSRIs in the management of PMS.

## DATA EXTRACTION

Data were independently extracted in duplicate on study design, patient charac-

teristics, drug type and dose, outcome measures (primary outcome measure was reduction in overall PMS symptoms), and side effects.

## MAIN RESULTS

15 studies met the selection criteria and involved 904 women (570 allocated to active treatment and 435 allocated to placebo, including 101 in crossover trials). The 2 most studied SSRIs were fluoxetine (7 trials) and sertraline (5 trials). Most of the trials presented continuous data; thus, an overall standardized mean difference was calculated by using a random-effects model. The overall standardized mean difference for reduction in PMS symptoms in favor of SSRIs was  $-1.1$  (95% CI  $-1.4$  to  $-0.8$ ), which is equivalent to an odds ratio of 6.9 (CI 3.9 to 12.2). In 7 trials where data could be extracted for a comparison between physical and behavioral symptoms, SSRIs were found to be effective in treating both types with no statistically significant variance in the overall standardized

mean differences. No difference in the effectiveness of SSRIs existed when comparing continuous and intermittent doses or between trials funded by pharmaceutical companies and those funded otherwise. Withdrawal from the studies because of side effects was 2.5 times greater (CI 1.6 to 3.7) in the SSRI group than in the placebo group.

## CONCLUSION

In patients with severe premenstrual syndrome, selective serotonin reuptake inhibitors reduce symptoms.

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## COMMENTARY

The well-done review by Dimmock and colleagues shows that SSRIs improve symptoms in PMS. *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*, criteria for the severe variant of PMS—premenstrual dysphoric disorder—are stringent and require prospective confirmation of the symptoms and their unique occurrence during the luteal phase and disappearance during the follicular phase for 2 consecutive cycles. Depression may occur concomitantly. No accepted pathophysiologic abnormality exists, which means we have no diagnostic laboratory test for this difficult-to-define condition. It has, however, been shown that women with PMS exhibit an abnormal response to normal hormonal changes in contrast to those without PMS (1).

As the authors have shown in a previous review (2), other pharmacologic agents also work in PMS, which suggests that we try those with the lowest side-effect profile after carefully identifying patients for treatment. But it would not be appropriate to limit treatment to medication with these often severely distressed patients. Easily deployed nondrug interventions also work well. Cognitive behavioral treatment is effective in patients with medically unexplained symptoms (3). Furthermore, careful attention to the provider-patient relationship in a patient-centered atmosphere has equally well-documented benefits, as recent reviews note (4, 5). Thus, one

can best help symptomatic patients with a multidimensional intervention, one small part of which is an SSRI.

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## References

- Schmidt PJ, Nieman LK, Danaceau MA, Adams LF, Robinow DR. Differential behavioral effects of gonadal steroids in women with and in those without premenstrual syndrome. *N Engl J Med*. 1998;338:209-16.
- Wyatt KM, Dimmock PW, Jones PW, O'Brien PM. Efficacy of vitamin B-6 in the treatment of premenstrual syndrome: systematic review. *BMJ*. 1999;318:1375-81.
- Sharpe M. Cognitive behavioural therapies in the treatment of functional somatic symptoms. In: Mayou R, Bass CM, Sharpe M, editors. *Treatment of Functional Somatic Symptoms*. Oxford/New York: Oxford University Press; 1995:122-43.
- Williams GC, Frankel RM, Campbell TL, et al. Research on relationship-centered care and healthcare outcomes from the Rochester Biopsychosocial Program: a self-determination theory integration. *Families, Systems and Health*. 2000;18:79-90.
- Stewart MA. Effective physician-patient communication and health outcomes: a review. *CMAJ*. 1995;152:1423-33.