

## JOURNAL REVIEWS

**Oral contraceptives and premenstrual symptoms: comparison of a 21/7 and extended regimen.** Coffee AL, Kuehl TJ, Willis S, Sulak PJ. *Am J Obstet Gynecol* 2006; **195**: 1311–1319

**Objectives and methodology:** The purpose of this study was to assess the incidence and severity of premenstrual syndrome (PMS)-type symptoms in patients converted from a 21/7 combined oral contraceptive (COC) regimen to an extended regimen (24 weeks). This was a single-centre prospective observational study in 114 women using a locally devised single-item premenstrual symptom questionnaire, the Scott and White (S&W) Mood Scale, and the more generally accepted and validated Penn State Daily Symptom Report (DSR 17). Subjects were followed during a two-cycle 21/7-day COC regimen and then were switched to a 168-day extended regimen of a COC containing 3 mg drospirenone and 30 mg ethinylestradiol (DRSP/EE) (Yasmin®). A total of 111 subjects completed the 21/7 regimen and 102 (92%) the extended regimen.

**Results:** The study confirmed the presence of PMS symptoms in women using standard 21/7 COCs and that these symptoms reached peak intensity during the pill-free interval. A statistically significant decrease in DSR 17 scores was noted when switching from a 19-nortestosterone progestogen containing COC to the drospirenone COC. This may be a reflection of the anti-mineralocorticoid and anti-androgenic effects of this progestogen but as this was not a randomised controlled head-to-head comparative trial caution should be exercised in making this conclusion.

**Discussion:** Elimination of the 7-day pill-free interval with the 168-day extended regimen resulted in a statistically significant reduction in premenstrual symptoms that was more pronounced in the last two 28-day intervals of the regimen. Subjects were classified as exhibiting low or high cyclic variability from the 21/7 regimen. Not surprisingly, those with low variability (less PMS) showed less improvement during the extended regimen. The limitations of the study were that it lacked a placebo arm; subjects acted as their own 'controls.' Also, the subjects were heterogeneous in that:

- 1 Not all those on the 21/7 regimen had PMS symptoms.
- 2 They were on a variety of COCs to begin with.
- 3 They may or may not have had endogenous PMS before starting the COC.

**Take home messages:** The most valuable information provided by this study for the clinician is that:

- 1 COCs may induce PMS symptoms especially when used in a 21/7 regimen.
- 2 There may be advantages to prescribing COCs containing anti-mineralocorticoid and/or anti-androgenic progestogens to reduce PMS symptoms.

- 3 There are significant benefits in using extended regimen preparations rather than 21/7 preparations in controlling/reducing PMS symptoms.
- 4 Extended cycle regimens used for PMS may take a few months to become fully effective.

Reviewed by **Nick Panay**, MRCOG, MFFP  
Consultant, *The Menopause and PMS Centre, Queen Charlotte's & Chelsea Hospital, Hammersmith Hospitals NHS Trust, London, UK*

**Impact of a theoretically based sex education programme (SHARE) delivered by teachers on NHS registered conceptions and terminations: final results of cluster randomised trial.** Henderson M, Wight D, Raab GM, Abraham C, Parkes A, Scott S, *et al. BMJ* 2007; **334**: 133–136

How to improve the poor sexual health outcomes of young people in the UK has been the focus of a lot of research, and the topic of sex education in schools arouses at least as much impassioned emotional debate as scientific rigour (see rapid responses to the *BMJ* editorial accompanying this article). The SHARE programme was developed in the early 1990s to be delivered by teachers in secondary schools to pupils aged 13–15 years, with the primary aim of reducing unwanted pregnancies. It was compared, in a cluster randomised trial, with existing sex education programmes in schools. Interim evaluations were encouraging, with teachers and pupils evaluating the SHARE programme more positively than the control programmes, and some improvement in knowledge and reduction in regretted sexual intercourse but no overall change in sexual behaviour including condom and contraceptive use. This final analysis examines conceptions and terminations up to age 20 years, for the whole cohort. The trial had been powered to detect a 33% decrease in the cumulative termination rate in pupils attending intervention schools. At randomisation at age 14 years, the pupils in intervention and control schools were representative of Scottish young people with respect to socioeconomic status and family structure.

There were differences in rates of conceptions and terminations between individual schools, with the expected inverse proportion between conception rates and termination rates. However, there was no significant difference in conception or termination rates between control and intervention schools. This was not a trial of intervention versus no sex education; existing programmes may have some behavioural effect, although evidence for this from controlled trials is weak. The authors conclude that the potential for whole class sex education to influence behaviour in this area may have been reached. It may also be that these interventions were not far

reaching enough, for example, that they should be combined with primary school interventions, peer-led programmes, and parental involvement programmes, as well as interventions that aim to improve general educational opportunities. Watch this space.

Reviewed by **Pauline McGough**, MRCOG, MFFP  
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**Unintended pregnancy and use of emergency contraception among a large cohort of women attending for antenatal care or abortion in Scotland.** Lakha F, Glasier A. *Lancet* 2006; **368**: 1782–1787

Unintended pregnancy is common and can significantly affect the life of the women concerned regardless of the outcome of the pregnancy.

During the 8-month study period, 3815/5630 (68%) eligible women attending abortion services ( $n = 907$ ), miscarriage clinic ( $n = 615$ ) or antenatal clinic ( $n = 2293$ ) in a large hospital in Scotland completed a self-administered questionnaire. Uptake was between 55% in the abortion clinic and 75% in the antenatal clinic.

Patients were asked about their pregnancy intention using a validated intendedness instrument and about use of emergency contraception during the conception cycle. Unsurprisingly, 65.7% of women in the antenatal clinic had a high intendedness score whereas 89.7% of those attending the abortion clinic had a high unintendedness score. Interestingly, 26.6% of women attending antenatal, 22.8% of women attending miscarriage and 10.0% of women attending abortion clinic were ambivalent about their pregnancy intention. Moreover, 7.7% of women in the antenatal clinic and 11.9% in the miscarriage clinic had a high unintendedness score. Younger age was associated with unintended pregnancy in the antenatal and miscarriage clinic but not in the abortion clinic.

Emergency contraception (EC) was used by 11.8% of women seeking abortion and 1.0% attending antenatal care and correlated strongly with intendedness score. Again, young age was associated with EC use in those attending antenatal care but not in those seeking abortion. Overall 50% of women used EC after each episode of unprotected sex in the conception cycle.

With high levels of unintended and ambivalent conceptions and low uptake of EC there is clearly an urgent need to better understand the risk (of pregnancy) perception and patterns of contraceptive behaviour of women in the UK.

Reviewed by **Eva Jungmann**, MRCP, MSc  
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