Women should be informed how to safely stop SSRIs. [*New 2016*] ✓

Women with PMS who become pregnant while taking an SSRI/SNRI should be aware of the possible, although unproven, association with congenital malformations. They should be reassured that if such an association does exist, it is likely to be extremely small when compared to the general population. [*New 2016*] B

Are diuretics efficacious in the treatment of PMS?

Spironolactone can be used in women with PMS to treat physical symptoms. [*New 2016*] C

How can PMS be managed surgically?

Can surgical management of PMS be justified and is it efficacious?

When treating women with severe PMS, hysterectomy and bilateral oophorectomy has been shown to be of benefit. D

When treating women with PMS, hysterectomy and bilateral oophorectomy can be considered when medical management has failed, long-term GnRH analogue treatment is required or other gynaecological conditions indicate surgery. [*New 2016*] ✓

Should the efficacy of surgery always be predicted by the prior use of GnRH analogues?

When treating women with PMS, surgery should not be contemplated without preoperative use of GnRH analogues as a test of cure and to ensure that HRT is tolerated. ✓

What is the role of HRT after surgical management?

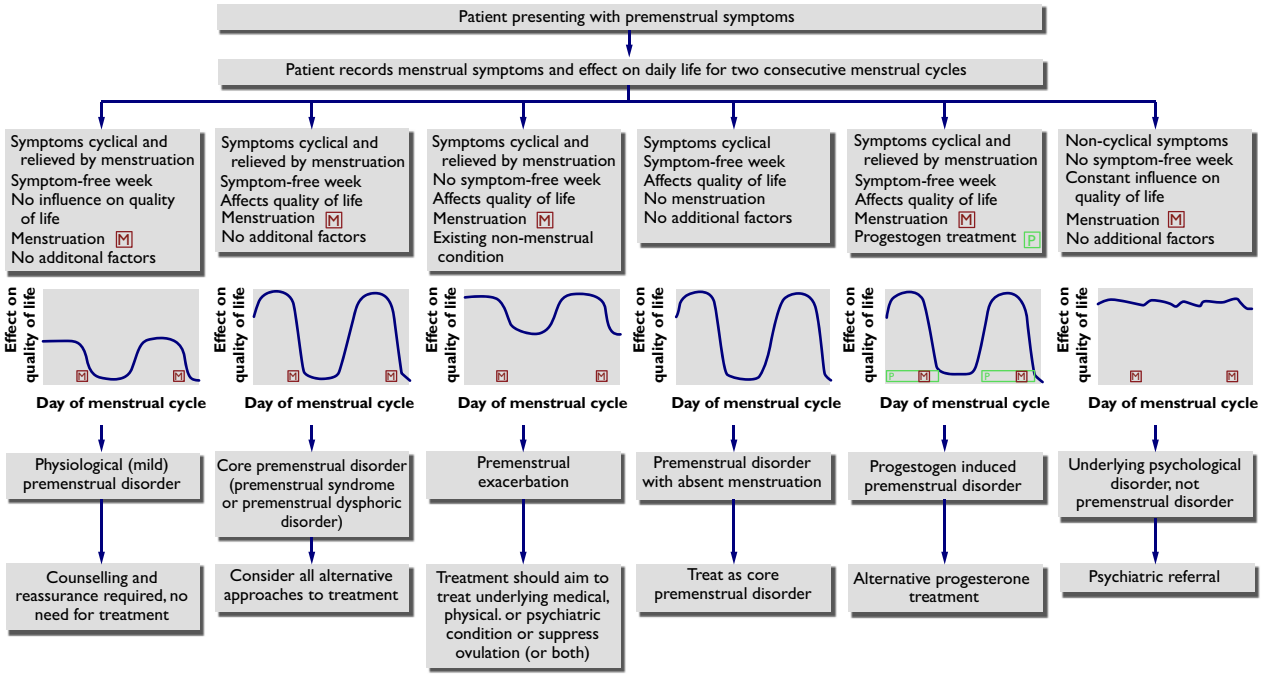
Women being surgically treated for PMS should be advised to use HRT, particularly if they are younger than 45 years of age. [*New 2016*] ✓

Is there a role for endometrial ablation, oophorectomy or hysterectomy alone?

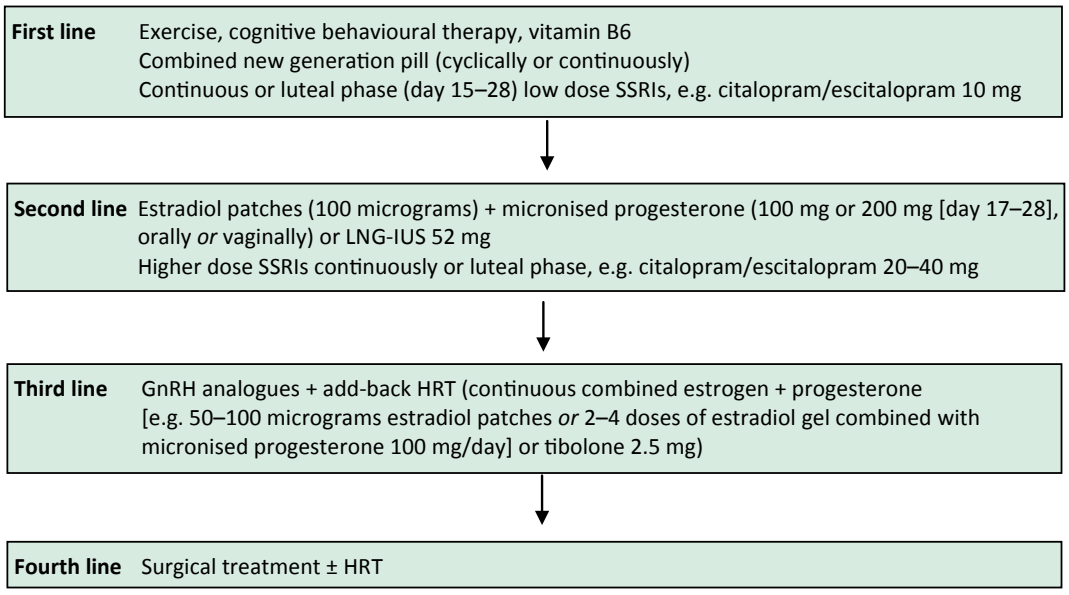
When treating women with severe PMS, endometrial ablation and hysterectomy with conservation of the ovaries are not recommended. [*New 2016*] ✓

Bilateral oophorectomy alone (without removal of the uterus) will necessitate the use of a progestogen as part of any subsequent HRT regimen and this carries a risk of reintroduction of PMS-like symptoms (progestogen-induced premenstrual disorder). [*New 2016*] ✓

Classification of PMS



How PMS is treated – a decision-making algorithm



1. Purpose and scope

The aim of this guideline is to review the diagnosis, classification and management of premenstrual syndrome (PMS). The evidence for pharmacological and nonpharmacological treatments is examined.

2. Introduction and background epidemiology

Since the 2007 guideline, there has been considerable work by the International Society for Premenstrual Disorders (ISPMD) and the National Association for Premenstrual Syndrome (NAPS) to achieve consensus on the recognition, diagnosis, classification and management of PMS. Misdiagnosis of PMS (e.g. confusion with bipolar disorder) and the use of a wide range of treatments, often with little evidence for effectiveness and safety, demand that these issues are addressed.

2.1 Definition of PMS

PMS encompasses a vast array of psychological symptoms such as depression, anxiety, irritability, loss of confidence and mood swings. There are also physical symptoms, typically bloatedness and mastalgia. It is the timing, rather than the types of symptoms, and the degree of impact on daily activity that supports a diagnosis of PMS. The character of symptoms in an individual patient does not influence the diagnosis. In order to differentiate physiological menstrual symptoms from PMS, it must be demonstrated that symptoms cause significant impairment to the individual during the luteal phase of the menstrual cycle.[1]

2.2 Classification of PMS (ISPMD consensus)

Core premenstrual disorders (PMDs) are the most commonly encountered and widely recognised type of PMS. As with all PMDs, symptoms must be severe enough to affect daily functioning or interfere with work, school performance or interpersonal relationships. The symptoms of core PMDs are nonspecific and recur in ovulatory cycles. They must be present during the luteal phase and abate as menstruation begins, which is then followed by a symptom-free week. There is no limit on the type or number of symptoms experienced; however, some individuals will have predominantly psychological, predominantly somatic or a mixture of symptoms (Appendix II).

There are also PMDs that do not meet the criteria for core PMDs. These are called 'variant' PMDs and fall into four subtypes.

1. '**Premenstrual exacerbation of an underlying disorder**', such as diabetes, depression, epilepsy, asthma and migraine. These patients will experience symptoms relevant to their disorder throughout the menstrual cycle.
2. '**Non-ovulatory PMDs**' occur in the presence of ovarian activity without ovulation. This is poorly understood due to a lack of evidence, but it is thought that follicular activity of the ovary can instigate symptoms.
3. '**Progestogen-induced PMDs**' are caused by exogenous progestogens present in hormone replacement therapy (HRT) and the combined oral contraceptive (COC) pill. This reintroduces symptoms to women who may be particularly sensitive to progestogens. Although progestogen-only contraceptives may introduce symptoms, as they are noncyclical they are not included within variant PMDs and are considered adverse effects (probably with similar mechanisms) of continuous progestogen therapy.

4. '**PMDs with absent menstruation**' include women who still have a functioning ovarian cycle, but for reasons such as hysterectomy, endometrial ablation or the levonorgestrel-releasing intrauterine system (LNG-IUS) they do not menstruate.[2]

An additional term, premenstrual dysphoric disorder (PMDD) classified by the American Psychiatric Association in 1994[3] requires fulfilment of strict criteria. The Diagnostic and Statistical Manual of Mental Disorders (DSM-V) demands five out of 11 stipulated symptoms, one of which must include mood.[4] The symptoms must strictly occur in the luteal phase and must be severe enough to disrupt daily functioning. However, these restrictive criteria may exclude women with a narrow range of severe symptoms who should receive treatment.

Care must be taken not to label women with underlying psychiatric or somatic disorders that do not appear to be influenced by the menstrual cycle as having PMS.

2.3 Prevalence and aetiology

Four in ten women (40%) experience symptoms of PMS and of these 5–8% suffer from severe PMS.[5] A cross-sectional survey of 929 women based in Southampton who completed a 6-week prospective symptom diary revealed a 24% prevalence of premenstrual symptoms.[6] Although the aetiology remains uncertain, it revolves around the ovarian hormone cycle, which is reinforced by the absence of PMS prior to puberty, during pregnancy and after the menopause. Currently two theories predominate and appear interlinked. The first suggests that some women are 'sensitive' to progesterone and progestogens, since the serum concentrations of estrogen or progesterone are the same in those with or without PMS. The second theory implicates the neurotransmitters serotonin and γ-aminobutyric acid (GABA). Serotonin receptors are responsive to estrogen and progesterone, and selective serotonin reuptake inhibitors (SSRIs) are proven to reduce PMS symptoms. GABA levels are modulated by the metabolite of progesterone, allopregnanolone, and in women with PMS the allopregnanolone levels appear to be reduced.[7]

3. Identification and assessment of evidence

This guideline was developed in accordance with standard methodology for producing RCOG Green-top Guidelines. The Cochrane Library (including the Cochrane Database of Systematic Reviews and DARE), EMBASE, Trip, MEDLINE, Psych INFO, CINAHL, the Allied and Complementary Medicine Database (AMED), and the British Nursing Index (BNI) were searched. The search was restricted to articles published between 2005 and March 2014 in the English language. The databases were searched using the relevant Medical Subject Headings (MeSH) terms, including all subheadings, and this was combined with a keyword search. Search words included 'premenstrual syndrome', 'premenstrual tension', 'late luteal phase dysphoric disorder', 'premenstrual dysphoric disorder', 'PMDD', 'PMS', 'PMD', 'LLPDD', 'PMT'. The search was restricted to humans and there were no language restrictions.

Where possible, recommendations are based on available evidence. In the absence of published evidence, these have been annotated as 'good practice points'. Further information about the assessment of evidence and the grading of recommendations may be found in Appendix I.

4. How is PMS diagnosed?

When clinically reviewing women for PMS, symptoms should be recorded prospectively, over two cycles using a symptom diary, as retrospective recall of symptoms is unreliable. ✓

A symptom diary should be completed by the patient prior to commencing treatment. ✓

Gonadotrophin-releasing hormone (GnRH) analogues may be used for 3 months for a definitive diagnosis if the completed symptom diary alone is inconclusive. ✓

There are many patient-rated questionnaires available. However, the Daily Record of Severity of Problems (DRSP) remains the most widely used and is simple for patients to use.[2] The DRSP has also been consistently shown to provide a reliable and reproducible record of symptoms (see Appendix III).[8] The Premenstrual Symptoms Screening Tool (PSST)[9] is another patient-rated questionnaire; however, it is retrospective and has been validated for screening but not diagnosis. Various attempts at electronic data capture have been attempted. Commercially available diagnostic apps are now available, but these require validation. Another easily accessible symptom diary exists on the NAPS website (www.pms.org.uk). This diary is not validated but is sufficient to be used in the context of clinical practice.[10]

Before any form of treatment is initiated, symptom diaries should be completed over at least two consecutive menstrual cycles. Treatment may improve symptoms, therefore masking underlying PMS, but it can also create a pattern of symptoms incompatible with a diagnosis of PMS, making the interpretation of DRSP charts confusing. These charts should be brought by the patient to any future appointments.

Symptom diaries can sometimes be confusing and inconclusive: this is most likely to occur in those patients with variant PMDs. GnRH analogues, which are widely used within gynaecology, can be useful in separating those with and those without PMS by inhibiting cyclical ovarian function. These should be used for 3 months to establish a definitive diagnosis. This is to allow a month for the agonist to generate a complete hormonal suppressive effect, as well as providing 2 months' worth of symptom diaries.

5. What aspects are involved in delivering a service to women with PMS?

5.1 When should women with PMS be referred to a gynaecologist?

Referral to a gynaecologist should be considered when simple measures (e.g. COCs, vitamin B6, SSRIs) have been explored and failed and when the severity of the PMS justifies gynaecological intervention. ✓

General practitioners will manage the majority of cases of PMS; therefore, awareness of the condition together with up-to-date information on its management is essential. Referral to secondary care should be reserved for those with confirmed PMS in whom simple measures have failed to control symptoms. In women whose symptom diaries demonstrate noncyclical symptoms, an underlying psychiatric or somatic disorder should be considered.