

The Perimenopause or Menopausal Transition

KEY POINTS:

- The menopausal transition and perimenopause are inter-changeable terms.
- Determining the reproductive stage is standardised using the STRAW staging criteria and is based on menstrual cycle patterns
- Measurement of reproductive hormones is not required for accurate reproductive staging and in general is of limited clinical use
- The menopausal transition can be more symptomatic than the menopause, and the management depends on understanding the menstrual cycle patterns and the symptoms present.

What is perimenopause?

As defined by the Stages of Reproductive Aging Workshop (STRAW) criteria the terms perimenopause or menopausal transition cover the transition from the reproductive age through to menopause, i.e. early perimenopause stage -2, late perimenopause stage -1, the last menstrual period stage 0 and early postmenopause stage +1 (see diagram below) (1, 2). The principal criteria for entry into the early perimenopause include onset of irregular or 'variable length' cycles with at least 7-day difference in cycle length between consecutive cycles OR a cycle length <25 days or >35 days. Late perimenopause starts once the cycles are >60 days in length.

Clinical Assessment

Many perimenopausal women complain of a myriad of symptoms including irregular menstrual cycles, heavy or a scarcity of menstrual bleeding, headaches (3), breast swelling and tenderness (4), mood swings, anxiety and depressed mood (5), memory difficulties, crawling sensations under the skin, myalgia, arthralgia, disturbed sleep patterns, weight gain and central adiposity (6). In fact, on the whole, women going through the menopausal transition are more symptomatic than their postmenopausal counterparts (7). This is likely a reflection of the complex changes occurring in reproductive hormones and peptides within the hypothalamo-pituitary-ovarian axis. Erratic peaks in oestradiol and inconsistent luteal phase levels of progesterone are common and as a result, there is a wide variation in menstrual cyclicity and menstrual flow (8). Women can complain of symptoms of both excess oestrogen (headaches, breast tenderness, menstrual flooding) and symptoms of oestrogen deficiency (vaginal dryness, vasomotor symptoms). Ovulation is unpredictable and, therefore, contraception is still required for two years after the final menstrual period for women under 50 and one year for women over 50.

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An assessment of a midlife women in a clinical practice is important in terms of giving her information on “what is going on” and “what to expect”.

Measuring hormone levels in the menopausal transition

According to the STRAW criteria, determining entry into the menopausal transition does not require blood tests. A thorough menstrual cycle history is the most reliable tool. Irregular cycles in the early menopausal transition have been associated with all of the following - two-fold higher than normal levels of oestradiol, extremely low levels of oestradiol and abnormally frequent ovulatory episodes (8). Similarly, FSH levels can vary widely. Although luteal phase progesterone levels can be used to determine occurrence of ovulation, their measurement in determination of reproductive stage is not useful.

For women who have had a hysterectomy or endometrial ablation, assessment of the stage of the menopausal transition they are in can be challenging. For women at the usual age of menopause (45-55), evaluation of symptoms can be enough to help guide clinical management. If necessary, measurement of FSH may assist (9). Women under 45 in these circumstances who are experiencing symptoms typical of perimenopause should have an FSH measurement, repeated in about 6 weeks, in order to diagnose early menopause or premature ovarian insufficiency (see AMS information sheet [Spontaneous Premature Ovarian Insufficiency](#)).

Women who are using a Mirena or other progesterone only contraceptive may also present a diagnostic challenge. If they are over 50, have amenorrhoea, and have two FSH measurements over 30 IU/L taken at least six weeks apart, they can be advised that they can cease using their contraception after a further 12 months. These women can transition to MHT after this time if desired, or before this time if contraceptive needs are covered (10).

Health implications:

The menopausal transition is an excellent opportunity for a general health assessment including assessment of cardiometabolic risk, bone density and osteoporosis risk factors, cervical screening, and breast screening. Early adoption of healthy eating and exercise regimens and limitation of alcohol consumption is indicated for all women. Because of cycle irregularity and unpredictability of ovulation, discussion of contraceptive measures is imperative.

Management of the menopausal transition

Effective management of menopausal symptoms requires an understanding of whether a woman is likely to be in the early or late menopausal transition. In EARLY perimenopause, women are more likely to complain of high oestrogen-associated symptoms (heavy periods, breast tenderness, weight gain, headaches) and in the LATE menopausal transition, more likely to complain of low oestrogen-associated symptoms (vasomotor symptoms, vaginal dryness).

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Although heavy, erratic menstrual bleeding is often a feature of perimenopause, investigation of this is warranted if the bleeding is excessively heavy and prolonged, if it occurs after a long period of amenorrhoea, or if it is in the setting of obesity or previous history of polycystic ovary syndrome (see AMS Information sheet [Bleeding – perimenopausal, postmenopausal and breakthrough bleeding on MHT](#)).

In the early perimenopause wide swings of oestrogen with associated high oestrogen symptoms, such as heavy periods and mastalgia, are best managed by suppressing the cycle with a combined oral contraceptive pill (OCP) if not contra-indicated. Newer OCPs containing the oestrogen formulations used in conventional MHT (oestradiol or oestradiol valerate eg Zoely, Qlaira) are useful, as is limiting the unmedicated days. This will usually address the problem of heavy menstrual flow. The levonorgestrel IUD will also address heavy bleeding and provide contraception but it will not suppress the cycle and therefore does not address symptoms of mastalgia. Women using a levonorgestrel IUD in perimenopause who develop oestrogen deficiency symptoms can be treated by adding an oestrogen patch, as Mirena provides endometrial protection for MHT.

Progestins alone eg medroxyprogesterone acetate (MPA) or norethisterone (NETA) during the luteal phase are ineffective. Longer duration of use with 5 mg norethisterone TDS over 21 days (day 5-26 of the cycle) is very effective (about 70% reduction in blood loss). Both compliance and efficacy of this 21-day NETA regimen has been compared to the Nuva Ring. The Nuva Ring was found to be as effective as NETA and to have significantly higher compliance (11).

Vasomotor symptoms (VMS) can present in the early perimenopause but they are usually more prominent in the late perimenopause when the cycle becomes less frequent. During this time the institution of adequate oestrogen therapy is indicated and the transition to conventional MHT is possible. Ovulation and therefore conception becomes less likely. Cyclical combined MHT is recommended in the first 1-2 years if there is an intact uterus to reduce the nuisance of unscheduled bleeding. In hysterectomised women, oestrogen alone can be used. Further information on the various MHT options can be found in the AMS information sheets [Combined MHT](#) and [Oestrogen only MHT](#).

Women may find it reassuring to know that the menopausal transition is usually more symptomatic, than postmenopause, which is also easier to manage clinically. The transition through perimenopause usually takes 2-6 years.

The same contraindications and relative contraindications to HRT/MHT apply to women in the menopausal transition and postmenopause and include a history of hormone dependent malignancy and undiagnosed abnormal vaginal bleeding, venous thrombo-embolic event, active liver disease, uncontrolled hypertension, and established cardiovascular or cerebrovascular disease. (See AMS information sheet [Risks and benefits of MHT/HRT](#)).

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Table 1: STRAW criteria

	Menarche										FMP (0)	
Stage	-5	-4	-3b	-3a	-2	-1	+1 a	+1b	+1c	+2		
Terminology	REPRODUCTIVE				MENOPAUSAL TRANSITION		POSTMENOPAUSE					
	Early	Peak	Late		Early	Late	Early				Late	
					<i>Perimenopause</i>							
Duration	variable				variable	1-3 years	2 years (1+1)	3-6 years	Remaining lifespan			
PRINCIPAL CRITERIA												
Menstrual Cycle	Variable to regular	Regular	Regular	Subtle changes in Flow/Length	Variable Length Persistent ≥7- day difference in length of consecutive cycles	Interval of amenorrhea of ≥60 days						
SUPPORTIVE CRITERIA												
Endocrine				Low	Variable	↑ Variable	↑ >25 IU/L**	↑ Variable	Stabilizes			
FSH				Low	Low	Low	Low	Low	Very Low			
AMH				Low	Low	Low	Low	Low	Very Low			
Inhibin B				Low	Low	Low	Low	Low	Very Low			
Antral Follicle Count				Low	Low	Low	Low	Very Low	Very Low			
DESCRIPTIVE CHARACTERISTICS												
Symptoms							Vasomotor symptoms <i>Likely</i>	Vasomotor symptoms <i>Most Likely</i>				Increasing symptoms of urogenital atrophy

* Blood draw on cycle days 2-5 ↑ = elevated

**Approximate expected level based on assays using current international pituitary standard⁶⁷⁻⁶⁹

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