4 Assessment and investigation

At a glance

- Explain that diagnosis of the menopause in women aged 45 years and over is made on history and assessment, not on the interpretation of blood tests.
- For women over the age of 45 with menopausal symptoms, blood tests are not required to diagnose the menopause.
- Women under 40 years often report delayed diagnosis. Carefully consider those young women who present with amenorrhoea or a change in regularity over three months or more, in the absence of other obvious causes.
- Be familiar with online resources that you know are reputable and evidence based and direct women to these sites (see Appendix).
- Become familiar with the expected bleeding pattern for each type of HRT regimen so that you can easily reassure women or identify an abnormal bleeding pattern.

The menopause consultation

Consultations about the menopause are becoming more complex because of the wide range of therapeutic options, the controversies regarding hormone replacement therapy (HRT) and the increasing use of over-the-counter and complementary therapies. This chapter describes the menopause consultation investigations needed and suggested follow-up. Screening for health promotion is discussed in Chapter 5 and contraception in Chapter 6.

In 2011, the British Menopause Society proposed that all women be offered a health and lifestyle consultation at around the age of 50 years. The aim of such a consultation would be to promote health into the years ahead, by identifying those at risk of conditions such as diabetes, dementia, coronary heart disease and osteoporosis and to offer women active preventive measures. In addition, it would offer women an opportunity to discuss the changes that occur around the menopause and

the management of symptoms, and to discuss sexual and contraceptive health (Box 4.1).

Box 4.1

Summary of the menopause consultation

- Initial consultation summary
- Symptom history, gynaecological history, past medical history and family history
- Exclude suspected pathology
- Health promotion: smoking, alcohol, exercise and weight management
- Consider risk factors for long-term health and manage appropriately, e.g. congenital heart disease, osteoporosis
- Measure baseline blood pressure and body mass index
- Pelvic and breast examination only if clinically indicated
- Discuss participation in national screening programmes
- Secondary investigations if clinically indicated
- Assess contraceptive and sexual health needs
- Discuss HRT risks and benefits and provide written information
- Provide information on ways of managing symptoms without HRT

Symptom assessment

Most women usually present to clinicians for help with menopausal symptoms, often starting before any changes in menses pattern are noticed. There are validated menopause symptom questionnaires available; for example, the Greene Climacteric Scale,[1] the Menopause Rating Scale[2] and the Menopause Specific Quality of Life Questionnaire.[3] While these are useful for menopause research, they are seldom used in everyday clinical practice. Women can usually describe the most troublesome symptoms, how often they occur and what effect they are having on life and work. Sometimes it is useful to ask women to hone down their many symptoms to just three or four that they would most like help with. Often, these will fall into categories of symptoms: vasomotor, psychological and urogenital. Some clinicians use a simple symptom score chart which, while not validated, is useful for comparison at subsequent visits (Figure 4.1). Symptoms are discussed in Chapter 2.

Name

Hospital no.

Date of visit

Visit no.

ON HRT? YES / NO

All answers are treated in the strictest confidence

The scoring system runs from 0 to 3 depending on the severity of your symptoms

Boxes under 0 – Not troubled at all
Boxes under 1 – Mildly troubled
Boxes under 2 – Moderately troubled
Boxes under 3 – Severely troubled

Please clearly indicate your answer by placing an X against the appropriate box and please do answer all the questions. *Thank you for your assistance; your answers will enable us to rapidly understand the severity of your problem and, on subsequent visits, will help us to identify the degree of success of the treatment.*

	QUESTIONS	ANSWERS 0	1	2	3	Office Use Only
General problems:	Daytime sweats and flushes					
	Night-time sweats and flushes					
	Unable to sleep					
	Headaches					
	Tiredness					
	Loss of energy					
	General aches and pains					
	General itchiness					
	Formication (feeling of something crawling over you)					
Emotional problems:	Tearfulness					
	Depression					
	Feeling of unworthiness					
	Irritability					
	Anger					
	Bitterness					
	Panic attacks					
	± palpitations					
	Aggression					
Bladder problems:	Daytime frequency					
	Urgency					
	Urge incontinence (leakage if you do not get there in time)					
	Stress incontinence (leakage if cough, sneeze or laugh)					
	Night-time frequency					
	Bed wetting					
Sexual problems:	Vaginal dryness/soreness					
	Vaginal Itching					
	Soreness/pain with intercourse					
	Bleeding with intercourse					
	Loss of libido (sex drive)					
	Difficulty achieving orgasm					
Personality problems:	Loss of memory					
	Loss of concentration					
	Inability to cope					
	Feelings of personality disintegration					
Period problems:	Periods much lighter					
	Periods much heavier					
	Irregular bleeding between periods					
	New bleed over 1 year after periods have stopped					

Figure 4.1 A simple symptom score chart (courtesy of London North West Healthcare NHS Trust Menopause Clinic)

Attitudes to the menopause

During the initial consultation, women will start to reveal any myths, misunderstandings and long-held beliefs about menopause and HRT. Listening to these will save time once treatment options are discussed, as women will want to be sure that any treatment offered is safe for them and consistent with their health values (for example, not wanting to interfere with nature, being worried about cancer, wanting to remain in control). Understanding how women have reached these values helps the consultation to be personalised and relevant.

Menstrual history

A change in menstrual pattern is ultimately inevitable, with a wide variation in correlation between menstrual irregularity and the onset of symptoms. In women under 40 who are suspected to have premature ovarian insufficiency, symptoms will play an important role in diagnosis and management. In women at average age of menopause (around 51 years in the UK), the key factor is to exclude suspected pathology, sometimes by clinical investigation, and to identify the stage of menopause (peri- or postmenopausal) if offering HRT. Postmenopausal bleeding is usually evaluated in a rapid access assessment clinic. Relevant risk factors for endometrial cancer should be sought in the history. These include obesity, diabetes, nulliparity, history of chronic anovulation (for example, in polycystic ovary syndrome), late menopause, use of unopposed estrogens or tamoxifen and a family history of hereditary nonpolyposis colorectal cancer, ovarian or endometrial cancers.

Medical assessment

The purpose of taking a medical history is to identify potential risk factors for future disease and to assess suitability for therapeutic intervention, if needed (summarised in Table 4.1). Screening is discussed further in Chapter 5.

Table 4.1

Patient assessment: personal or family medical history

Factor	Questions for the woman
Breast, ovarian or bowel cancer in close family members	Have any parents, sisters or brothers or the patient had such cancers? If so, at what age did they develop it? Has she been tested for *BRCA1* or *2*?
Venous thrombosis	Have any parents, brothers or sisters, or the woman herself, had such conditions? If so, when? Was it after major surgery or prolonged immobilisation? Was the person taking the contraceptive pill or pregnant? Did they have any test to confirm the clot? Was the clinical suspicion confirmed? Were they treated with anticoagulants such as heparin or warfarin?
Risk factors for heart disease and strokes	Does she exercise, if so how often and what type? Has she already had a heart attack or stroke? Have her parents, brothers or sisters had a myocardial infarction or stroke? If so, at what age? Does she smoke? If so, how many cigarettes a day? Does she have hypertension or diabetes? Has she had a lipid assessment? Is she obese?
Risk factors for osteoporosis	Was the menopause before the age of 45 years? Has she taken systemic corticosteroids for 6 months or longer? Has she had anorexia or significant weight loss? Does she have a family history of osteoporosis (especially in her mother or sister but also father)? Has she suspected low calcium or vitamin D intake or deficiency, or malabsorption disorders? Has she already had a fracture? If so, was it from standing height; how did it happen and where was it?
Other	Does she experience migraine? If so, was it related to menstruation? Which medicines are being taken, including herbal remedies and vitamin supplements? Is the woman at risk of pregnancy? What are her sexual health needs? Does she have vaginal dryness and/or discomfort with sex? Does she have any bladder urgency, frequency or leakage? What is her normal diet? How much alcohol does she drink?

Examination and investigations

Physical examination should include recording of body mass index and blood pressure. Clinical examination of the breasts and pelvic examination are not routinely recommended but they should be performed if clinically indicated. Any suspicion of pathology should be investigated prior to HRT use. In this instance, such examinations may be indicated.

Hormone assays

Follicle-stimulating hormone, luteinising hormone and estradiol

For women in whom premature ovarian insufficiency is suspected, hormone assays will contribute to the diagnosis and may need to be repeated on two or three occasions (see Chapter 12). If the woman is still menstruating, the test should be done on day one to five of cycle. In women aged over 45 years, hormone assays are seldom clinically helpful and are not routinely recommended (Table 4.2). Exceptions might include women without a marker of menses, such as those with intrauterine contraceptive systems, hysterectomy or endometrial ablation and those with non-typical menopausal symptoms.

Hormone assays should be done over successive cycles. Consistently high postmenopausal levels (follicle-stimulating hormone, FSH, > 40 iu/l) may not be measurable even in women with oligomenorrhoea and can be misleading. FSH measurements will be unreliable in women using the combined oral contraceptive and high-dose progestogens, as well as if they are taking HRT. FSH can be measured more reliably in women using progestogen-only pills and levonorgestrel-releasing intrauterine systems.

Table 4.2

UK Recommendations on follicle-stimulating hormone (FSH) testing from the National Institute of Health and Care Excellence guidance, *Menopause: Diagnosis and Management* (2015)[4]

Age	FSH
≥ 45 years with menopausal symptoms	No
40–45 years with menopause symptoms, including a change in cycle	Consider
< 40 years, suspicion of menopause	Test on at least two occasions, 4–6 weeks apart.

Women who ask for a 'menopause test' should be given a careful explanation as to why such tests are not recommended. Estimates of the levels of luteinising hormone, estradiol, progesterone and testosterone are of no value in the diagnosis of ovarian insufficiency. Levels of estradiol may be of some value in checking absorption of estradiol delivered by the non-oral route (e.g. patches). They should not be used when estrogen is given orally, as the major circulating metabolite in this case is estrone.

Testosterone

Women who complain of a lack of libido may request measurement of their levels of testosterone. In women, slightly more than two-thirds of circulating testosterone is bound to sex hormone binding globulin (SHBG) and a further one-third is weakly bound to albumin, leaving around 2% of the total testosterone in the free or unbound state, making testosterone measurements unhelpful. Instead of total testosterone, the 'free androgen index' is sometimes used. This index is calculated as follows:

$$\text{free androgen index} = 100 \times (\text{total testosterone} \div \text{SHBG})$$

The free androgen index is intended to give a guide to the level of free testosterone but it is not accurate. There are no universally agreed 'normal ranges' and actual levels do not necessarily correlate with symptoms. The index is sometimes used as a safety and monitoring measure when prescribing testosterone but there are no clear guidelines.

Secondary health investigations

If the clinician considers that the symptoms indicate not just the menopause but a secondary health condition, further investigations will be indicated. These may include:

- full blood count
- thyroid function tests (free thyroxine [t4] and thyroid-stimulating hormone)
- fasting glucose
- autoantibody screen
- catecholamines (diagnosis of phaeochromocytoma) and 24-hour urinary 5-hydroxyindoleacetic acid (diagnosis of carcinoid syndrome) – both rare causes of hot flushes.

Thrombophilia screen

Routine thrombophilia screening is not advocated. Testing for thrombophilia is only indicated in selected women, such as:

- women under 40 with a previous unprovoked venous thrombo-embolism (VTE)
- recurrent unprovoked VTE
- VTE in unusual sites (e.g. cerebral or mesenteric circulation)
- a family history of unexplained VTE affecting at least two first-degree relatives
- a family history of a specific thrombophilia, such as antithrombin, protein C or protein S deficiency
- warfarin-induced skin necrosis.

A negative thrombophilia result does not completely exclude an underlying increased risk of thrombosis so if thrombophilia testing is indicated, its limitations should be discussed.

Follow-up

After starting any therapy, follow-up is suggested after about three months. By this time, some improvement in symptoms should have been observed and early adverse effects will usually have subsided.[5] Changes in therapy may be indicated at this or at subsequent visits for alleviation of adverse effects, improvement of residual symptoms or to promote a more acceptable bleeding pattern.

When settled on a therapy, women may be seen annually to:

- check the effectiveness of therapy and presence of adverse effects
- monitor expected bleeding pattern
- update on best type of therapy for patients, which will change with age
- discuss pros and cons of continuing HRT and make a plan to stop or reduce dosage where appropriate
- promote health – blood pressure, weight, discuss screening, breast awareness.

Bleeding

In women taking cyclical HRT, it is normal to have a monthly withdrawal bleed and irregular bleeding is common in the first few months of starting continuous combined HRT. If bleeding is reported outside of normal

expected patterns, investigation will be necessary to rule out abnormal pathology. Additionally, the type of treatment should be documented, as should concordance with treatment – for example, missed tablets or non-adherent patches, which ultimately may be implicated in the abnormal bleeding. Investigations should be done according to local protocol but will include those in Table 4.3.

Table 4.3

Investigations for bleeding outside normal expected patterns

Investigation	Indications for use
Clinical assessment	Speculum and bimanual examination with visualisation of the vagina and cervix. Cervical cytology should be up to date in accordance with local screening programmes.
Transvaginal ultrasound	Used for initial assessment. An endometrial thickness cut off of >4 mm can be used for further investigation if using continuous combined HRT. If using cyclical HRT, transvaginal ultrasound should be performed at the end of a withdrawal bleed, but endometrial thickness is less consistent with this type of HRT. No endometrial thickness threshold completely excludes the possibility of early endometrial carcinoma and hysteroscopy is indicated if irregular bleeding continues despite dose adjustment.
Endometrial biopsy	Principal purpose is to obtain a histological diagnosis. Two main techniques are used: aspiration curettage as an outpatient procedure or dilation and curettage under general anaesthesia. Endometrial biopsy is usually combined with other techniques, such as transvaginal ultrasound or hysteroscopy, to increase sensitivity.
Endometrial histology	In the presence of abnormal histology, further clinical management will be required; the World Health Organization classification has four categories, with varying management strategies: > simple hyperplasia > complex hyperplasia > simple atypical hyperplasia > complex atypical hyperplasia.
Hysteroscopy	Allows direct visualisation of the uterine cavity. It is a superior method for the detection of endometrial polyps and submucosal myoma, which can easily be missed by endometrial biopsy procedures, ultrasonography or 'blind' curettage. It is usually performed under local anaesthesia but can be done under general anaesthesia in some situations.

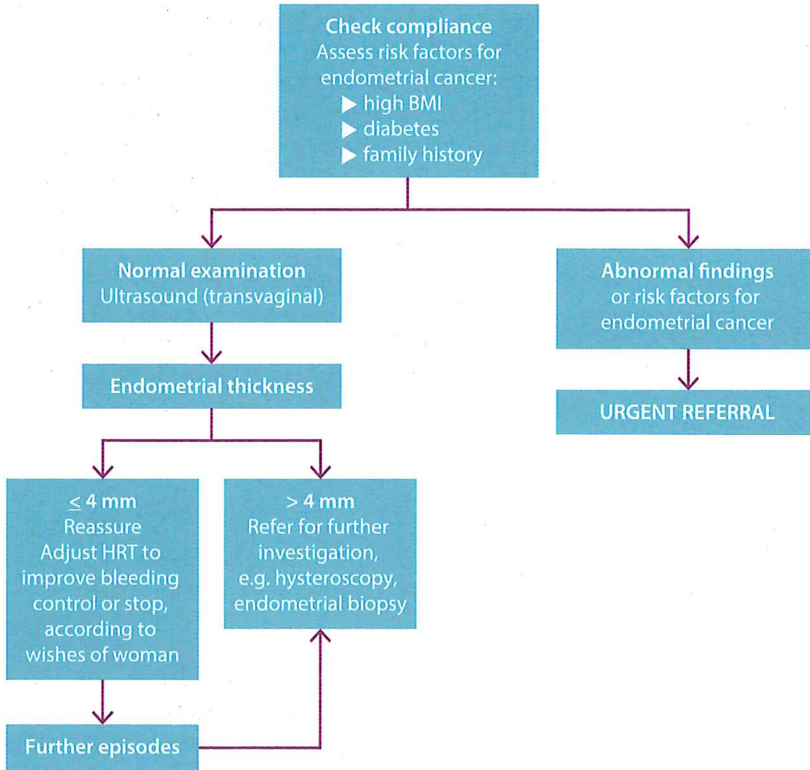

Figure 4.2 Management pathway for abnormal bleeding in women who use hormone replacement therapy

Persistent bleeding

Persistent abnormal bleeding with HRT can be difficult to manage. Once abnormal pathology is ruled out, a change in HRT regimen may resolve the problem. Women are unlikely to continue a treatment that gives unacceptable bleeding, even in the absence of histology. A change in route, dose or type of HRT may be necessary (Figure 4.2).

Decision making

The menopause consultation should enable a woman to decide on how best to manage her symptoms and move forward through her menopausal years. Does she want to promote health through lifestyle or dietary intervention and, if so, is that appropriate or realistic? Are her symptoms

impacting on her quality of life and, if so, does she want HRT? Is it safe for her to take it and what are her expectations and concerns? As practitioners we should guide women through the choices available while picking up on clinical cues that may suggest that certain options may be either preferable or not desirable. Younger women may be advised differently to older ones, while those with less severe symptoms may decide that no medical intervention is necessary. Women should be encouraged to participate in their health decisions around menopause and to take responsibility for their own future health. The menopause consultation is an ideal opportunity to encourage and enable women through these choices and, wherever possible, the clinician should support the woman's informed choice. The consultation can be supported by directing women to reputable online resources (see Appendix).

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Further reading

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