NICE National Institute for Health and Care Excellence

NICE guideline

Menopause: identification and management

NICE guideline
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Your responsibility

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

All problems (adverse events) related to a medicine or medical device used for treatment or in a procedure should be reported to the Medicines and Healthcare products Regulatory Agency using the Yellow Card Scheme.

Local commissioners and providers of healthcare have a responsibility to enable the guideline to be applied when individual professionals and people using services wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with complying with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Contents

This guideline is the basis of QS143.

Overview

This guideline covers identifying and managing menopause, including in people with premature ovarian insufficiency. It aims to improve the consistency of support and information provided to people experiencing menopause.

For information on related topics see our women's and reproductive health summary page.

Who is it for?

- Healthcare professionals who care for women, trans men and non-binary people registered female at birth with menopause-associated symptoms
- Women, trans men, and non-binary people registered female at birth with menopause-associated symptoms, their families or carers, and the public.

Recommendations

People have the right to be involved in discussions and make informed decisions about their care, as described in NICE's information on making decisions about your care.

NICE guidelines set out the care and services suitable for people with a specific condition or need, and people in particular circumstances or settings. We aim to improve quality by ensuring that people receive the best care and advice. Using inclusive language in healthcare is important for safety, and to promote equity, respect and effective communication with everyone.

Some recommendations in this guideline do not use inclusive language because:

- the evidence has not been reviewed, and expert opinion is that groups covered by these recommendations cannot be extended **or**
- the evidence has been reviewed, but the information available for some groups was too limited to make specific recommendations.

Healthcare professionals should use their clinical judgement when implementing the recommendations, taking into account each person's circumstances, needs and preferences, and ensuring all people are treated with dignity and respect throughout their care.

Making decisions using NICE guidelines explains how we use words to show the strength (or certainty) of our recommendations, and has information about prescribing medicines (including off-label use), professional guidelines, standards and laws (including on consent and mental capacity), and safeguarding.

This guideline covers women, trans men and non-binary people registered female at birth, who currently have menopause-associated symptoms or who will experience menopause in the future. The guideline does not cover people who are currently having gender-affirming hormone therapy. For trans men and non-binary people who have taken such therapy in the past and are no longer taking it, only recommendations 1.5.34 and 1.5.35 in the section on gender affirming therapy and the recommendation for research on the

impact of hormone replacement therapy (HRT) on health outcomes for these groups of people apply. All other recommendations apply to women, trans men and non-binary people registered female at birth who have never taken gender-affirming hormone therapy.

1.1 Individualised care

1.1.1 Tailor your approach to the person at all times when identifying, discussing, investigating and managing menopause, and adapt the approach if symptoms change over time. Follow the recommendations in NICE's guideline on patient experience in adult NHS services. **[2015]**

1.1.2 For general principles on how to discuss symptom management plans with people, including how to communicate risks, benefits and consequences, see NICE's guideline on shared decision making. **[2024]**

1.2 Information and support

1.2.1 Share information about menopause with people who have associated symptoms or are approaching menopause, and their family members or carers (as appropriate). This information should include all of the following:

- what menopause is, including that it is a life transition which:
  - usually takes place in mid-life **and**
  - can also happen earlier because of surgery or medical treatment, an inherited condition, or an unknown cause
- commonly associated symptoms (see recommendation 1.2.2)
- interventions, or changes the person can make to support their health and wellbeing. **[2015, amended 2024]**

1.2.2 Explain that symptoms associated with menopause may vary from minor to severe and be experienced over short or long time periods. As well as changes in menstrual cycle, symptoms may include:

- vasomotor symptoms (hot flushes and sweats)
- genitourinary symptoms (for example, vaginal dryness)
- effects on mood (for example, depressive symptoms)
- musculoskeletal symptoms (for example, joint and muscle pain)
- sexual difficulties (for example, low sexual desire). **[2015]**

1.2.3 Share information about contraception with people who have menopause-associated symptoms. See, for example, the Faculty of Sexual and Reproductive Healthcare guidance on contraception for women aged over 40 years. **[2015]**

1.2.4 Give advice on bone health to people experiencing menopause and discuss bone health with them at review appointments (see NICE's guideline on assessing the risk of fragility fracture in people with osteoporosis). **[2015]**

1.2.5 Explain to people experiencing menopause the importance of maintaining muscle mass and strength through physical activity. **[2015, amended 2024]**

1.2.6 Offer support and provide information about menopause and fertility to people who are likely to experience menopause as a result of medical or surgical treatment. Do this before and after they have their treatment. **[2015, amended 2024]**

Psychological support for early menopause

1.2.7 Offer psychological support to people who are experiencing early menopause (that is, menopause between the ages of 40 and 44) and are distressed by their diagnosis or its consequences. If needed, refer them to psychology services. **[2024]**

For a short explanation of why the committee made the 2024 recommendation and how it might affect practice, see rationale and impact section on psychological support for early menopause.

Full details of the evidence and the committee's discussion are in evidence review I: early menopause.

1.3 Identifying perimenopause and menopause

1.3.1 Identify the following, without laboratory tests, in otherwise healthy women, trans men and non-binary people registered female at birth who are aged 45 or over and have menopause-associated symptoms:

- perimenopause, if they have vasomotor symptoms that have recently started and any changes in their menstrual cycle
- menopause, if they have not had a period for at least 12 months and are not using hormonal contraception
- menopause, in those who have had a hysterectomy, based on the type and combination of symptoms they have (for example, vasomotor symptoms). **[2015]**

1.3.2 Take into account that it can be difficult to identify menopause in people who are taking hormonal treatments, for example, for the treatment of heavy menstrual bleeding. **[2015]**

1.3.3 Be aware that people from some ethnic minority backgrounds and people with some lifelong conditions may experience menopause at a younger age. **[2024]**

1.3.4 Do not use the following laboratory and imaging tests to identify perimenopause or menopause in people aged 45 or over:

- anti-Müllerian hormone
- inhibin A

- inhibin B
- oestradiol
- antral follicle count
- ovarian volume. **[2015]**

1.3.5 Do not use a follicle-stimulating hormone (FSH) blood test to identify menopause in people using combined oestrogen and progestogen contraception or high-dose progestogen. **[2015]**

1.3.6 Consider using the person's serum FSH level to confirm menopause only:

- in people aged 40 to 45 with menopause-associated symptoms, including a change in their menstrual cycle
- in people under 40 in whom menopause is suspected (see also diagnosing and managing premature ovarian insufficiency). **[2015]**

See also the recommendations on offering psychological support to:

- people experiencing early menopause (aged 40 to 44)**and**
- people with premature ovarian insufficiency.

For a short explanation of why the committee made the 2024 recommendation and how it might affect practice, see the rationale and impact section on identifying perimenopause and menopause.

Full details of the evidence and the committee's discussion are in evidence review I: early menopause.

1.4 Discussing management options with people aged 40 or over

This section only covers people aged 40 or over. For younger (under 40) women, trans men and non-binary people registered female at birth, see the recommendations on

diagnosing and managing premature ovarian insufficiency, including what to discuss with the person.

1.4.1 Discuss with the person the benefits and risks associated with each potential management option for menopause-associated symptoms. **[2024]**

Hormone replacement therapy

1.4.2 When discussing hormone replacement therapy (HRT) as a possible treatment for menopause-associated symptoms (in line with the recommendations on managing symptoms associated with menopause in people aged 40 and over), talk about the benefits and risks associated with:

- combined versus oestrogen-only HRT (see the recommendation and its rationale on indications for combined and oestrogen-only HRT, in the section on starting HRT about which of the 2 types of HRT the person would be offered, and why)
- transdermal versus oral HRT
- types of oestrogen and progestogen
- sequential versus continuous combined HRT
- dose and duration. **[2024]**

  Tailor the information about benefits and risks to the person's age, individual circumstances and potential risk factors. Use the information in managing symptoms associated with menopause in people aged 40 or over, and in the effect of HRT on specific health outcomes in people aged 40 or over to support this discussion.

1.4.3 If a person chooses to take HRT:

- discuss the possible duration of treatment at the outset
- at every review, rediscuss the benefits and risks of continuing treatment (see the section on reviewing treatment for anyone)

- explain that symptoms may return when HRT is stopped and discuss the option of restarting treatment if necessary. **[2024]**

Cognitive behavioural therapy

1.4.4 When discussing cognitive behavioural therapy (CBT) as a possible management option for symptoms associated with menopause, explain what CBT is (including menopause-specific CBT) and talk about the available options, taking into account the person's preferences and needs, for example:

- face-to-face or remote sessions
- individual or group sessions
- self-help options. **[2024]**

For a short explanation of why the committee made the 2024 recommendations and how they might affect practice, see the rationale and impact section on discussing management options with people aged 40 or over.

Full details of the evidence and the committee's discussion are in:

- evidence review A: cognitive behavioural therapy
- evidence review B1: managing genitourinary symptoms (network meta-analyses)
- evidence review D: breast cancer
- evidence review I: early menopause.

Complementary therapies and unregulated preparations

1.4.5 Explain to people with menopause-associated symptoms that the efficacy and safety of unregulated hormone preparations are unknown. **[2015]**

1.4.6 Explain to people who wish to try complementary therapies for menopause-associated symptoms, that the safety, quality and purity of constituents in unregulated preparations may be unknown. **[2015]**

1.4.7 Explain to people that there is some evidence that isoflavones or black cohosh may relieve vasomotor symptoms associated with menopause. However, explain that:

- multiple preparations are available, and their safety is uncertain
- different preparations may vary
- interactions with other medicines have been reported. **[2015]**

1.4.8 Advise people with a personal history of, or at high risk of, breast cancer that, although there is some evidence that St John's wort may help relieve vasomotor symptoms associated with menopause, there is uncertainty about:

- appropriate dosage
- persistence of effect
- variation in the nature and potency of preparations
- potential serious interactions with other medicines (including tamoxifen, anticoagulants and anticonvulsants). **[2015]**

1.5 Managing symptoms associated with menopause in people aged 40 or over

This section only covers people aged 40 or over. For younger (aged under 40) women, trans men, and non-binary people registered female at birth, see the recommendations on diagnosing and managing premature ovarian insufficiency.

For information about how comorbidities, contraindications and medical history might affect management choices, see taking medical history into account before offering treatment.

The benefits and risks of hormone replacement therapy (HRT) described in this guideline only cover the use of HRT within the licensed dosages.

Making decisions using NICE guidelines has information about prescribing medicines.

Vasomotor symptoms

1.5.1 Offer HRT to people with vasomotor symptoms associated with menopause. **[2015]**

1.5.2 Consider menopause-specific cognitive behavioural therapy (CBT) as an option for vasomotor symptoms associated with menopause:

- in addition to HRT **or**
- for people for whom HRT is contraindicated **or**
- for those who prefer not to take HRT. **[2024]**

1.5.3 Do not routinely offer selective serotonin reuptake inhibitors (SSRIs), serotonin and norepinephrine reuptake inhibitors (SNRIs) or clonidine as first-line treatment for vasomotor symptoms alone. **[2015]**

For a short explanation of why the committee made the 2024 recommendation on CBT and how it might affect practice, see the rationale and impact section on CBT for vasomotor symptoms.

Full details of the evidence and the committee's discussion are in evidence review A: cognitive behavioural therapy.

Genitourinary symptoms associated with menopause

People with no history of breast cancer

1.5.4 Offer vaginal oestrogen to people with genitourinary symptoms associated with

menopause (including those using systemic HRT) and review regularly as per the recommendations on reviews in this guideline. **[2024]**

1.5.5 When discussing the option of vaginal oestrogen, explain that:

- serious adverse effects are very rare
- their treatment should be reviewed in line with recommendations 1.9.2 and 1.9.3 in the section on reviewing treatment
- symptoms often return when vaginal oestrogen is stopped but treatment can be restarted if necessary
- vaginal oestrogen is absorbed locally – a minimal amount is absorbed into the bloodstream (when compared with systemic HRT), but this is unlikely to have a significant effect throughout the body. **[2024]**

1.5.6 When someone chooses vaginal oestrogen, make a shared decision with the person about whether to use an oestrogen cream, gel, tablet, pessary or ring. **[2024]**

1.5.7 Advise people with genitourinary symptoms associated with menopause that vaginal oestrogen can be used on its own or in combination with non-hormonal moisturisers or lubricants. **[2024]**

1.5.8 For people with genitourinary symptoms in whom vaginal oestrogen preparations are contraindicated, or for people who would prefer not to use vaginal oestrogen, consider non-hormonal vaginal moisturisers or lubricants. **[2024]**

1.5.9 Consider vaginal prasterone for genitourinary symptoms if vaginal oestrogen, or non-hormonal moisturisers or lubricants have been ineffective or are not tolerated. **[2024]**

1.5.10 Consider ospemifene as an oral treatment for genitourinary symptoms, if the use of locally applied treatments is impractical, for example, because of disability. **[2024]**

1.5.11 For the use of vaginal oestrogen in people with genitourinary symptoms and an overactive bladder, see the section on choosing medicines for an overactive

bladder, in NICE's guideline on managing urinary incontinence and pelvic organ prolapse in women. **[2024]**

1.5.12 For the use of vaginal oestrogen in people with genitourinary symptoms and recurrent urinary tract infections, see the recommendations on oestrogen in NICE's guideline on recurrent urinary tract infection (UTI) and the patient decision aid on reducing the chance of recurrent UTI in postmenopausal women. **[2024]**

For anyone who has been given any treatment for genitourinary symptoms associated with menopause, see the recommendations on reviewing treatment.

For a short explanation of why the committee made these recommendations and how they might affect practice, see the rationale and impact section on genitourinary symptoms associated with menopause in people with no personal history of breast cancer.

Full details of the evidence and the committee's discussion are in evidence review B1: managing genitourinary symptoms (network meta-analyses).

People with a personal history of breast cancer

1.5.13 Offer non-hormonal moisturisers or lubricants to people with a personal history of breast cancer and genitourinary symptoms associated with menopause. **[2024]**

1.5.14 Consider vaginal oestrogen for people with a personal history of breast cancer and genitourinary symptoms that have continued despite trying non-hormonal treatments (see also recommendation 1.5.15 for people receiving adjuvant aromatase inhibitor treatment for breast cancer). Vaginal oestrogen may be used in combination with a non-hormonal moisturiser or a lubricant.

In November 2024, this was an off-label use of vaginal oestrogen. See NICE's information on prescribing medicines. **[2024]**

1.5.15 For people currently having aromatase inhibitors as adjuvant treatment for breast cancer, work with a breast cancer specialist to identify treatment options for genitourinary symptoms that have continued despite trying non-hormonal

treatments.

1.5.16 When assessing the safety of vaginal oestrogens for someone in relation to breast cancer recurrence, take into account all of the following:

- the person's general risk factors for breast cancer recurrence (see recommendations 1.7.7 and 1.7.8 in NICE's guideline on early and locally advanced breast cancer for the definitions of medium or high risk and of low risk of recurrence)
- it is unknown whether vaginal oestrogen affects the risks of breast cancer recurrence
- vaginal oestrogen is absorbed locally, and some of it is absorbed into the bloodstream but compared with oestrogen from systemic HRT, the amount is minimal. **[2024]**

1.5.17 For people with a personal history of oestrogen receptor negative breast cancer, recognise that any oestrogen systemically absorbed from taking vaginal oestrogen is unlikely to increase the risk of breast cancer recurrence, and so it is likely to be safe. **[2024]**

1.5.18 For people with a personal history of oestrogen receptor positive breast cancer, recognise that:

- it is unknown whether any oestrogen systemically absorbed from taking vaginal oestrogen could increase the risk of breast cancer recurrence **and**
- adjuvants that block oestrogen receptors in cancer cells (for example, tamoxifen) would reduce any such potential impact. **[2024]**

For anyone who has been given any treatment for genitourinary symptoms associated with menopause, see the recommendations on reviewing treatment.

For a short explanation of why the committee made the 2024 recommendations and how they might affect practice, see the rationale and impact section on genitourinary symptoms associated with menopause in people with a personal history of breast cancer.

Full details of the evidence and the committee's decision are in evidence review B2: managing genitourinary symptoms (breast cancer recurrence).

Vaginal laser treatment

1.5.19 Do not offer vaginal laser treatment for genitourinary symptoms associated with menopause unless as part of a randomised controlled trial (see also NICE's interventional procedures guidance on transvaginal laser therapy for urogenital atrophy). **[2024]**

For a short explanation of why the committee made the 2024 recommendation and how it might affect practice, see the rationale and impact section on vaginal laser treatment.

Full details of the evidence and the committee's discussion are in evidence review B2: managing genitourinary symptoms (breast cancer recurrence).

Depressive symptoms

1.5.20 Consider HRT to alleviate depressive symptoms (not meeting the criteria for a diagnosis of depression) with onset around the same time as other symptoms associated with menopause. **[2015, amended 2024]**

1.5.21 Consider CBT as an option for people who have depressive symptoms (not meeting the criteria for a diagnosis of depression) in association with vasomotor symptoms:

- in addition to other management options **or**
- for people for whom other options are contraindicated **or**

- for those who prefer not to try other options. **[2024]**

1.5.22 For people experiencing menopause who are suspected to have or have been diagnosed with depression, follow the recommendations in this guideline alongside the recommendations in NICE's guideline on treating and managing depression in adults to achieve an optimal management plan. **[2024]**

For a short explanation of why the committee made the 2024 recommendations and how they might affect practice, see the rationale and impact section on management options for depressive symptoms or depression in people with menopause-associated symptoms.

Full details of the evidence and the committee's discussion are in evidence review A: cognitive behavioural therapy.

Sleep

1.5.23 Consider menopause-specific CBT as an option for people who have sleep problems (such as night-time awakening) in association with vasomotor symptoms:

- in addition to other management options (including HRT) **or**
- for people for whom other options are contraindicated **or**
- for people who prefer not to try other options. **[2024]**

For a short explanation of why the committee made the 2024 recommendation and how it might affect practice, see the rationale and impact section on CBT for sleep problems associated with menopause.

Full details of the evidence and the committee's discussion are in evidence review A: cognitive behavioural therapy.

Altered sexual function

1.5.24 Consider testosterone supplementation for people with low sexual desire associated with menopause if HRT alone is not effective. **[2015]**

Taking medical history into account before offering treatment for menopause associated symptoms

In this guideline, medical history covers both personal history and family history (for example, of breast cancer).

1.5.25 Consider referring people to a healthcare professional with expertise in menopause if:

- they have symptoms associated with menopause and contraindications to HRT **or**
- there is uncertainty about the most suitable management options for their symptoms. **[2015]**

Type 2 diabetes

1.5.26 Consider HRT for menopause-associated symptoms in people with type 2 diabetes after taking comorbidities into account and seeking specialist advice if needed. **[2015]**

Increased risk of venous thromboembolism

1.5.27 Consider transdermal rather than oral HRT for people with menopause-associated symptoms who are at increased risk of venous thromboembolism (VTE), including those with a body mass index (BMI) over 30 kg/m^2. **[2015]**

1.5.28 Consider referring people with menopause-associated symptoms who are at high risk of VTE (for example, those with a strong family history of VTE or a hereditary thrombophilia) to a haematologist for assessment before considering HRT. **[2015]**

Personal history of coronary heart disease or stroke

1.5.29 For people with a personal history of coronary heart disease or stroke, ensure that combined or oestrogen-only HRT is discussed with and offered, if appropriate, by a healthcare professional with expertise in menopause. **[2024]**

In November 2024, use of combined or oestrogen-only HRT in people with active or recent arterial thromboembolic disease was off-label. See NICE's information on prescribing medicines.

For a short explanation of why the committee made the 2024 recommendation and how it might affect practice, see the rationale and impact section on taking coronary heart disease or stroke into account before offering treatment.

Full details of the evidence and the committee's discussion are in evidence review C: cardiovascular disease and stroke.

Personal history of breast cancer or high risk of breast cancer

1.5.30 Offer people with menopause-associated symptoms and who have a personal history, or are at high risk, of breast cancer:

- information on all management options available to them
- referral to a healthcare professional with expertise in menopause. **[2015, amended 2024]**

1.5.31 For advice on the treatment of menopause-associated symptoms in people with a personal history of breast cancer or at high risk of breast cancer, see the section on menopause symptoms in NICE's guideline on early and locally advanced breast cancer and the section on risk reduction and treatment strategies in NICE's guideline on familial breast cancer. **[2015]**

Also see the section on complementary therapy and unregulated preparations in this guideline.

High familial risk of ovarian cancer

See the section on HRT after risk-reducing surgery in NICE's guideline on identifying and managing familial and genetic risk of ovarian cancer.

Planned medical or surgical treatment that is likely to result in menopause

1.5.32 Offer people who are likely to experience menopause as a result of medical or surgical treatment the opportunity to discuss fertility, both before and after they have their treatment, with a healthcare professional with expertise in fertility. **[2015, amended 2024]**

1.5.33 Offer people who are likely to experience menopause as a result of medical or surgical treatment the opportunity to discuss menopause, both before and after they have their treatment, with a healthcare professional with expertise in menopause. **[2015, amended 2024]**

Gender-affirming hormone therapy: past use

1.5.34 Ensure that trans men or non-binary people registered female at birth who have taken gender-affirming hormone therapy in the past and have symptoms associated with menopause can discuss these with a healthcare professional with expertise in menopause. **[2024]**

1.5.35 Consider menopause-specific CBT for vasomotor symptoms, difficulties with sleep or depressive symptoms associated with menopause for trans men and non-binary people registered female at birth who have taken gender-affirming hormone therapy in the past. CBT could be used:

- in addition to other management options **or**
- for people for whom other options are contraindicated **or**
- for those who prefer not to try other options. **[2024]**

For a short explanation of why the committee made the 2024 recommendations and how they might affect practice, see the rationale and impact section on managing menopause in people who have taken gender-affirming hormone therapy in the past.

Full details of the evidence and the committee's discussion are in evidence review C: cardiovascular disease and stroke.

1.6 Effects of hormone replacement therapy on specific health outcomes in people aged 40 or over

The benefits and risks of hormone replacement therapy (HRT) described in this guideline only cover the use of HRT within the licensed dosages.

Making decisions using NICE guidelines has information about prescribing medicines.

See the recommendation for people in early menopause (ages 40 to 44), for information on the effect of either taking or not taking HRT in early menopause on specific health outcomes.

People aged 45 or over

1.6.1 When discussing HRT as a treatment option for menopause-associated symptoms, explain that, overall, taking either combined HRT or oestrogen-only HRT is unlikely to affect life expectancy. **[2024]**

For a short explanation of why the committee made the 2024 recommendation and how it might affect practice, see the rationale and impact section on effect of HRT on life expectancy in people aged 45 or over.

Full details of the evidence and the committee's discussion are in evidence review H: all-cause mortality.

Combined HRT

This recommendation is for people with a uterus (see recommendation 1.8.1 on what type of HRT to offer).

1.6.2 When talking about combined HRT as a treatment option:

- discuss different combined HRT options to identify the one that best balances benefits and risks for the person
- share information from table 1: effect of combined HRT versus no HRT on specific health outcomes
- refer to the discussion aid on HRT and the likelihood of some medical conditions to provide information on the extent of benefits and risks associated with HRT. **[2024]**

See also the:

- recommendations on discussing benefits and risks of HRT, including the need to tailor the treatment to the person's age, personal circumstances and potential risk factors **and**
- section on communicating risks, benefits and consequences (including how to discuss numerical information) in NICE's guideline on shared decision making.

Table 1 Combined HRT versus no HRT: effect on specific health outcomes

–	Baseline risk	How does taking combined hormone replacement therapy (HRT) impact the risks related to this outcome?	Does the way combined HRT is taken affect these risks?	Does the type of hormone affect these risks?
All-cause mortality (life expectancy)	–	Overall, life expectancy is unlikely to change with the use of combined HRT. **[2024]**	–	–

–	Baseline risk	How does taking combined hormone replacement therapy (HRT) impact the risks related to this outcome?	Does the way combined HRT is taken affect these risks?	Does the type of hormone affect these risks?
Cancer: breast (Information in this table applies to people with no personal history of breast cancer)	Breast cancer risk varies depending on a person's modifiable and non-modifiable risk factors. **[2024]**	Breast cancer risk increases with combined HRT and the increase: • rises with duration of use • is higher in people currently taking HRT than in those who have taken it in the past • declines after stopping HRT but persists at least 10 years after stopping use. There is a very small increase in risk of death from breast cancer with combined HRT. Use the discussion aid on HRT for the number of breast cancer cases per	Breast cancer risk with sequential combined HRT is: • lower than with continuous combined HRT **but** • higher than without HRT. **[2024]**	There is insufficient evidence to establish whether the increase in risk of breast cancer is different with preparations containing micronised progesterone or dydrogesterone from what it is with preparations containing other progestogens. **[2024]**

–	Baseline risk	How does taking combined hormone replacement therapy (HRT) impact the risks related to this outcome?	Does the way combined HRT is taken affect these risks?	Does the type of hormone affect these risks?
		1,000 people taking combined HRT over a 5- or 10- year period. **[2024]**		

–	Baseline risk	How does taking combined hormone replacement therapy (HRT) impact the risks related to this outcome?	Does the way combined HRT is taken affect these risks?	Does the type of hormone affect these risks?
Cancer: endometrial (Information in this table applies to people with no personal history of endometrial cancer)	–	–	Endometrial cancer risk decreases with continuous combined HRT (use the discussion aid on HRT for the number of endometrial cancer cases per 1,000 people taking combined HRT over a 5-year period). **[2024]** Endometrial cancer risk may slightly increase with sequential combined HRT, and the increase may be greater with: • longer duration of use • fewer days of progestogen per cycle • increased dosage of	–

–	Baseline risk	How does taking combined hormone replacement therapy (HRT) impact the risks related to this outcome?	Does the way combined HRT is taken affect these risks?	Does the type of hormone affect these risks?
			oestrogen. **[2024]**	
Cancer: ovarian (Information in this table applies to people with no personal history of ovarian cancer)	The baseline population risk of ovarian cancer in women aged under 60 is very low (use the discussion aid on HRT for the number of ovarian cancer cases per 1,000 people over a 5-year period). **[2024]**	In people with ovaries, there is a very slight increase in ovarian cancer risk with combined HRT (use the discussion aid on HRT for the number of ovarian cancer cases per 1,000 people over a 5-year and a 10-year period). **[2024]**	–	–

–	Baseline risk	How does taking combined hormone replacement therapy (HRT) impact the risks related to this outcome?	Does the way combined HRT is taken affect these risks?	Does the type of hormone affect these risks?
Coronary heart disease (Information in this table applies to people with no personal history of coronary heart disease)	–	Coronary heart disease risk does not increase with combined HRT (use the discussion aid on HRT for the number of coronary heart disease cases per 1,000 people over a 5-year period.) **[2024]** Mortality from cardiovascular disease does not increase with combined HRT. **[2024]**	–	–
Dementia	–	Dementia risk might increase with combined HRT if it is started at 65 or over (use the discussion aid on HRT for the number of dementia cases per 1,000 people over a 4-year period). **[2024]**	–	–

–	Baseline risk	How does taking combined hormone replacement therapy (HRT) impact the risks related to this outcome?	Does the way combined HRT is taken affect these risks?	Does the type of hormone affect these risks?
Muscle mass and strength	–	There is limited evidence suggesting that HRT may improve muscle mass and strength. **[2015]**	–	–

–	Baseline risk	How does taking combined hormone replacement therapy (HRT) impact the risks related to this outcome?	Does the way combined HRT is taken affect these risks?	Does the type of hormone affect these risks?
Osteoporosis	The baseline population risk of fragility fracture: • is low in the UK for women, trans men and non-binary people registered female at birth who are around the age of menopause, **and** • varies from one person to another. **[2015]** (Use the discussion aid on HRT for the incidence of fragility fractures in women not taking HRT.) **[2015]**	Fragility fracture risk is decreased while taking HRT and this benefit: • is maintained during treatment but decreases once treatment stops • may continue for longer in people who take HRT for longer. **[2015]** (Use the discussion aid on HRT for the incidence of fragility fractures in women taking HRT.) **[2015]**	–	–

–	Baseline risk	How does taking combined hormone replacement therapy (HRT) impact the risks related to this outcome?	Does the way combined HRT is taken affect these risks?	Does the type of hormone affect these risks?
Stroke (Information in this table applies to people with no personal history of stroke)	The baseline population risk of stroke in women aged under 60 is very low. **[2024]**	–	Stroke risk is unlikely to increase with the use of combined HRT that includes transdermal oestrogen (see the discussion aid on HRT, for the number of stroke cases per 1,000 people over a 5-year period). **[2024]** Stroke risk increases with combined HRT containing oral oestrogen and the increase: • rises with higher oestrogen dosage and longer duration of treatment, for example, if used for more than 5 years • is greater	–

–	Baseline risk	How does taking combined hormone replacement therapy (HRT) impact the risks related to this outcome?	Does the way combined HRT is taken affect these risks?	Does the type of hormone affect these risks?
			with increasing age at first starting HRT • differs between ethnic groups and may be greater in Black people. (See the discussion aid on HRT, for the number of stroke cases per 1,000 people over a 5-year period.) **[2024]**	
Type 2 diabetes	–	The risk of developing type 2 diabetes does not increase with HRT. **[2015]** Generally, no adverse effect on blood glucose control is reported when taking HRT. **[2015]**	The risk is not affected whether HRT is taken orally or transdermally. **[2015]**	–

–	Baseline risk	How does taking combined hormone replacement therapy (HRT) impact the risks related to this outcome?	Does the way combined HRT is taken affect these risks?	Does the type of hormone affect these risks?
Venous thromboembolism (VTE)	–	VTE risk is not increased with transdermal HRT. **[2015]**	VTE risk is increased with oral HRT. **[2015]** VTE risk is greater with oral than transdermal HRT. **[2015]**	–

Table 1 lists the differences in specific health outcomes between people who are taking or have taken combined HRT, and those who have never had HRT.

The statements from 2015 in tables 1 and 2 do not distinguish between combined and oestrogen-only HRT. These statements have been included in both tables to better support discussions.

A downloadable version of this table is also available.

For a short explanation of why the committee made the 2024 recommendations and how they might affect practice, see the rationale and impact section on effect of combined HRT on specific health outcomes in people aged 45 or over.

Full details of the evidence and the committee's discussion are in:

- evidence review C: cardiovascular disease and stroke
- evidence review D: breast cancer
- evidence review E: endometrial cancer
- evidence review F: ovarian cancer
- evidence review G: dementia.

Oestrogen-only HRT

This recommendation is for people who have had a total hysterectomy (see recommendation 1.8.1 on what type of HRT to offer).

1.6.3 When talking about oestrogen-only HRT as a treatment option:

- discuss different oestrogen-only HRT options to identify the one that best balances benefits and risks for the person
- share information from table 2: effect of oestrogen-only HRT versus no HRT on specific health outcomes
- refer to the discussion aid on HRT and the likelihood of some medical conditions to provide information on the extent of benefits and risks associated with HRT. **[2024]**

See also the:

- recommendation on discussing benefits and risks of HRT, including the need to tailor the treatment to the person's age, personal circumstances and potential risk factors and
- section on communicating risks, benefits and consequences (including how to discuss numerical information) in NICE's guideline on shared decision making.

Table 2 Oestrogen-only HRT versus no HRT: effect on specific health outcomes

–	Baseline risk	How does taking oestrogen-only hormone replacement therapy (HRT) impact the risks related to this outcome?	Does the way oestrogen-only HRT is taken affect these risks?	Does the type of hormone taken affect these risks?
All-cause mortality (life expectancy)	–	Overall, life expectancy is unlikely to change with the use of oestrogen-only HRT. **[2024]**	–	–

–	Baseline risk	How does taking oestrogen-only hormone replacement therapy (HRT) impact the risks related to this outcome?	Does the way oestrogen-only HRT is taken affect these risks?	Does the type of hormone taken affect these risks?
Cancer: breast (Information in this table applies to people with no personal history of breast cancer)	Breast cancer risk varies depending on a person's modifiable and non-modifiable risk factors. **[2024]**	There is very little or no increase in breast cancer risk with oestrogen-only HRT. There is little or no increase in the risk of breast cancer mortality with oestrogen-only HRT. Use the discussion aid on HRT for the number of breast cancer cases per 1,000 people taking oestrogen-only HRT over a 5- or 10-year period. **[2024]**	–	Breast cancer risk is similar with oestradiol and with conjugated equine oestrogen. **[2024]**

–	Baseline risk	How does taking oestrogen-only hormone replacement therapy (HRT) impact the risks related to this outcome?	Does the way oestrogen-only HRT is taken affect these risks?	Does the type of hormone taken affect these risks?
Cancer: endometrial (Information in this table applies to people with no personal history of endometrial cancer)	–	In people with a uterus, endometrial cancer risk increases with oestrogen-only HRT (use the discussion aid on HRT for the number of endometrial cancer cases per 1,000 people taking oestrogen-only HRT over a 5-year period). **[2024]** See also recommendation 1.8.1 on which type of HRT to offer depending on whether people have a uterus or not in the section on starting HRT. **[2024]**	In people with a uterus, endometrial cancer risk increases with both oral and transdermal oestrogen-only HRT. **[2024]**	–
Cancer: ovarian (Information in this table applies to people with no personal history of ovarian cancer)	The baseline population risk of ovarian cancer in women aged under 60 is very low. (Use the discussion aid on HRT for the number of ovarian cancer cases per 1,000 people over a 5-year period). **[2024]**	In people with ovaries, ovarian cancer risk increases very slightly after 5 years of using oestrogen-only HRT and this risk increases with duration of use (use the discussion aid on HRT for the number of ovarian cancer cases per 1,000 people over a 5-year and a 10-year period). **[2024]**	Ovarian cancer risk increases with both transdermal and oral oestrogen-only HRT. **[2024]**	–

–	Baseline risk	How does taking oestrogen-only hormone replacement therapy (HRT) impact the risks related to this outcome?	Does the way oestrogen-only HRT is taken affect these risks?	Does the type of hormone taken affect these risks?
Coronary heart disease (Information in this table applies to people with no personal history of coronary heart disease)	–	Coronary heart disease risk does not increase with oestrogen-only HRT (use the discussion aid on HRT for the number of coronary heart disease cases per 1,000 people over a 5-year period). **[2024]** Mortality from cardiovascular disease does not increase with oestrogen-only HRT. **[2024]**	–	–
Dementia	–	Dementia risk is unlikely to increase with oestrogen-only HRT (see the discussion aid on HRT for the number of dementia cases per 1,000 people over a 5-year period). **[2024]**	–	–
Muscle mass and strength	–	There is limited evidence suggesting that HRT may improve muscle mass and strength. **[2015]**	–	–

–	Baseline risk	How does taking oestrogen-only hormone replacement therapy (HRT) impact the risks related to this outcome?	Does the way oestrogen-only HRT is taken affect these risks?	Does the type of hormone taken affect these risks?
Osteoporosis	The baseline population risk of fragility fracture: • is low in the UK for women, trans men and non-binary people registered female at birth who are around the age of menopause **and** • varies from one person to another. (Use the discussion aid on HRT for the incidence of fragility fractures in women.) **[2015]**	Fragility fracture risk is decreased while taking HRT and this benefit: • is maintained during treatment but decreases once treatment stops • may continue for longer in people who take HRT for longer. (Use the discussion aid on HRT for the incidence of fragility fractures in women.) **[2015]**	–	–

–	Baseline risk	How does taking oestrogen-only hormone replacement therapy (HRT) impact the risks related to this outcome?	Does the way oestrogen-only HRT is taken affect these risks?	Does the type of hormone taken affect these risks?
Stroke (Information in this table applies to people with no personal history of stroke)	The baseline population risk of stroke in women aged under 60 is very low. **[2024]**	–	Stroke risk increases with oral oestrogen-only HRT and the increase: • rises with the dosage of oestrogen • is greater if HRT is started after the age of 60. (See the discussion aid on HRT, for the number of stroke cases per 1,000 people over a 5-year period.) **[2024]** Stroke risk is unlikely to increase with transdermal oestrogen-only HRT (see the discussion aid on HRT, for the number of stroke cases per 1,000	–

–	Baseline risk	How does taking oestrogen-only hormone replacement therapy (HRT) impact the risks related to this outcome?	Does the way oestrogen-only HRT is taken affect these risks?	Does the type of hormone taken affect these risks?
			people over a 5-year period). **[2024]**	
Type 2 diabetes	–	The risk of developing type 2 diabetes does not increase with HRT. **[2015]** Generally, no adverse effect on blood glucose control is reported when taking HRT. **[2015]**	The risk is not affected whether HRT is taken orally or transdermally. **[2015]**	–
Venous thromboembolism (VTE)	–	VTE risk is not increased with transdermal HRT. **[2015]**	VTE risk is increased with oral HRT. **[2015]** VTE risk is greater with oral than transdermal HRT. **[2015]**	–

Table 2 lists the differences in specific health outcomes between people who are taking or have taken oestrogen-only HRT, and those who have never had HRT.

The statements from 2015 in tables 1 and 2 do not distinguish between combined and oestrogen-only HRT. These statements have been included in both tables to better support discussions.

A downloadable version of this table is also available.

For a short explanation of why the committee made the 2024 recommendation and how it might affect practice, see the rationale and impact section on effect of oestrogen-only HRT on specific health outcomes in people aged 45 or over.

Full details of the evidence and the committee's discussion are in:

- evidence review C: cardiovascular disease and stroke
- evidence review D: breast cancer
- evidence review E: endometrial cancer
- evidence review F: ovarian cancer
- evidence review G: dementia.

Cardiovascular disease prevention

1.6.4 Do not offer combined or oestrogen-only HRT for primary or secondary prevention of cardiovascular disease. For guidance on ways to reduce the risk of cardiovascular disease (for example, lifestyle changes), refer to NICE's guideline on cardiovascular disease: risk assessment and reduction, including lipid modification. **[2024]**

For a short explanation of why the committee made the 2024 recommendation and how it might affect practice, see the rationale and impact section on cardiovascular disease prevention.

Full details of the evidence and the committee's discussion are in evidence review C: cardiovascular disease and stroke.

Dementia prevention

1.6.5 Do not offer combined or oestrogen-only HRT for the purpose of dementia prevention. For dementia prevention, see NICE's guideline on dementia, disability

and frailty in later life – mid-life approaches to delay or prevent onset. **[2024]**

For a short explanation of why the committee made the 2024 recommendation and how it might affect practice, see the rationale and impact section on dementia prevention.

Full details of the evidence and the committee's discussion are in evidence review C: cardiovascular disease and stroke.

People in early menopause (ages 40 to 44)

1.6.6 When discussing HRT as a treatment option, explain to people experiencing early menopause that, for them, the benefits and risks of either taking or not taking HRT are likely to lie between those for people with premature ovarian insufficiency and those for people aged 45 or over. **[2024]**

See also the recommendations on discussing benefits and risks in the section on HRT and managing symptoms associated with menopause for people aged 40 and over, including the need to tailor the treatment to the person's age, personal circumstances and potential risk factors.

For a short explanation of why the committee made the 2024 recommendation and how it might affect practice, see the rationale and impact section on effects of HRT in early menopause on specific health outcomes.

Full details of the evidence and the committee's discussion are in evidence review I: early menopause.

1.7 Diagnosing and managing premature ovarian insufficiency in people under 40

Diagnosing premature ovarian insufficiency

1.7.1 Take into account the person's clinical history (for example, previous medical or surgical treatment) and family history when diagnosing premature ovarian insufficiency. **[2015]**

1.7.2 Diagnose premature ovarian insufficiency in women, trans men and non-binary people registered female at birth who are under 40 based on:

- menopause-associated symptoms, including no or infrequent periods (taking into account whether the person has had a hysterectomy) **and**
- elevated follicle stimulating hormone (FSH) levels on 2 blood samples taken 4 to 6 weeks apart. **[2015]**

1.7.3 Do not diagnose premature ovarian insufficiency on the basis of a single blood test. **[2015]**

1.7.4 Do not routinely use anti-Müllerian hormone testing to diagnose premature ovarian insufficiency. **[2015]**

1.7.5 If there is doubt about the diagnosis of premature ovarian insufficiency, refer the person to a specialist with expertise in menopause or reproductive medicine. **[2015]**

Managing premature ovarian insufficiency

1.7.6 Offer sex steroid replacement with a choice of hormone replacement therapy (HRT) or a combined hormonal contraceptive to people with premature ovarian insufficiency, unless contraindicated (for example, in people with hormone-sensitive cancer). **[2015]**

1.7.7 Explain to people with premature ovarian insufficiency:

- the importance of starting hormonal treatment either with HRT or a combined hormonal contraceptive and continuing treatment until at least the age of natural menopause (unless contraindicated)
- that the baseline population risk of diseases such as breast cancer and cardiovascular disease increases with age and is very low in people under the age of 40
- that HRT may have a beneficial effect on blood pressure when compared with a combined oral contraceptive
- that both HRT and combined oral contraceptives offer bone protection
- that HRT is not a contraceptive. **[2015]**

1.7.8 Give people with premature ovarian insufficiency and contraindications to hormonal treatments advice, including on bone and cardiovascular health, and on symptom management. **[2015]**

1.7.9 Consider referring people with premature ovarian insufficiency to healthcare professionals with the relevant experience to help them manage all aspects of physical and psychosocial health related to their condition. **[2015]**

1.8 Starting and stopping hormone replacement therapy for anyone

Starting HRT

1.8.1 For people who wish to take hormone replacement therapy (HRT) for symptoms associated with menopause:

- offer combined HRT to people with a uterus
- offer oestrogen-only HRT to people who have had a total hysterectomy.

  Also see recommendation 1.8.2. **[2024]**

1.8.2 For people with a condition that may be affected by HRT, consider seeking advice on the choice of HRT from a healthcare professional with specialist knowledge of that condition. **[2024]**

1.8.3 If a person chooses to take HRT, use the lowest effective dosage. **[2024]**

1.8.4 Explain to people with a uterus that vaginal bleeding is a common side effect of systemic HRT within the first 3 months of treatment, and they will be asked about this during their 3-month review. Advise them to seek medical help promptly if they experience vaginal bleeding after 3 months. **[2015]**

Stopping HRT

1.8.5 Offer people who are stopping HRT a choice of gradually reducing or immediately stopping treatment. **[2015]**

1.8.6 Explain to people that:

- gradually reducing HRT may limit recurrence of symptoms in the short term
- gradually reducing or immediately stopping HRT makes no difference to their symptoms in the longer term. **[2015]**

1.8.7 Stop systemic HRT in people who are diagnosed with breast cancer in line with the recommendations on menopause symptoms in NICE's guideline on early and locally advanced breast cancer. **[2024]**

For a short explanation of why the committee made the 2024 recommendation and how it might affect practice, see the rationale and impact section on starting and stopping HRT for anyone.

Full details of the evidence and the committee's discussion are in:

- evidence review D: breast cancer risk
- evidence review E: endometrial cancer risk.

1.9 Reviewing treatment for anyone

1.9.1 Discuss with people the importance of keeping up to date with nationally recommended health screening. **[2015]**

1.9.2 Review each treatment for symptoms associated with menopause:

- at 3 months to assess efficacy and tolerability
- annually thereafter, unless there are clinical indications for an earlier review (such as treatment ineffectiveness, side effects or adverse events). **[2015]**

1.9.3 Refer people to a healthcare professional with expertise in menopause if treatments do not improve their menopause-associated symptoms or they have ongoing side effects. **[2015]**

Terms used in this guideline

This section defines terms that have been used in a particular way for this guideline. For other definitions, see the NICE glossary and the Think Local, Act Personal Care and Support Jargon Buster.

Combined HRT

Hormone replacement therapy (HRT) with oestrogen and progestogen.

Continuous combined HRT

HRT in which oestrogen and progestogen are taken together, daily.

Depressive symptoms

For the purposes of this guideline, depressive symptoms are any symptoms included in the ICD-11 and DSM-5 criteria for the diagnosis of depression, as reproduced in NICE's guideline on managing and treating depression in adults, but the extent, duration and number of which does not lead to a diagnosis of:

- depression, as defined by ICD-11 or DSM-5 **or**
- chronic depressive symptoms, as defined in NICE's guideline on managing and treating depression in adults.

Genitourinary symptoms associated with menopause

Genitourinary symptoms associated with menopause include vulvovaginal dryness, pain with sex, vulvovaginal discomfort or irritation, and discomfort or pain when urinating.

Healthcare professional with expertise in menopause

Healthcare professionals with specialist knowledge, skills and training who can (in collaboration with the relevant specialists) manage, or advise colleagues in managing, complex menopause-related needs and risk factors affecting decision making, including:

- complex medical problems that potentially affect use of treatments for menopause associated symptoms
- menopause associated symptoms for those at elevated risk of breast or ovarian cancer, or with a personal history of hormone dependent cancer.

Their training should be recognised by a professional body such as the British Menopause Society, the Faculty of Sexual and Reproductive Healthcare or the Royal College of Obstetricians and Gynaecologists.

Sequential combined HRT

Sometimes also referred to as combined cyclical HRT. A form of HRT in which oestrogen is taken every day, and the progestogen is taken for usually half of the month.

Systemic HRT

HRT in which the hormones are absorbed into the bloodstream and have an effect throughout the body. As part of systemic HRT:

- oestrogen can be taken orally, or transdermally, as a patch, gel or spray that delivers the hormone through the skin

- progestogen can be taken orally, transdermally as a patch, or be delivered through an intrauterine system.

Recommendations for research

The guideline committee has made the following recommendations for research.

Key recommendations for research

1 Impact of HRT on health outcomes in early menopause

What is the effect of either taking or not taking hormone replacement therapy (HRT) on health outcomes for people experiencing early menopause (aged 40 to 44)? **[2024]**

For a short explanation of why the committee made this recommendation for research, see the rationale section on effects of HRT use in early menopause on specific health outcomes.

Full details of the evidence and the committee's discussion are in evidence review I: early menopause.

2 Type of progestogen in HRT and breast cancer or cardiovascular disease

Do different types of progestogen (for example, micronised progesterone) alter the risks of breast cancer or cardiovascular disease? **[2024]**

For a short explanation of why the committee made this recommendation for research, see the rationale section on effect of combined HRT on specific health outcomes in people aged 45 or over.

Full details of the evidence and the committee's discussion are in:

- evidence review C: cardiovascular disease and stroke
- evidence review D: breast cancer
- evidence review E: endometrial cancer.

3 Mode of administration of HRT

Combined HRT

Do different modes of administration of combined HRT alter the risks of breast cancer, coronary heart disease or dementia? **[2024]**

For a short explanation of why the committee made this recommendation for research, see the rationale section on effect of combined HRT on specific health outcomes in people aged 45 or over.

Full details of the evidence and the committee's discussion are in:

- evidence review C: cardiovascular disease and stroke
- evidence review D: breast cancer
- evidence review E: endometrial cancer.

Oestrogen-only HRT

Do different modes of administration of oestrogen-only HRT alter the risks of breast cancer, coronary heart disease or dementia? **[2024]**

For a short explanation of why the committee made this recommendation for research, see the rationale section on effect of oestrogen-only HRT on specific health outcomes in people aged 45 or over.

Full details of the evidence and the committee's discussion are in:

- evidence review C: cardiovascular disease and stroke
- evidence review D: breast cancer
- evidence review E: endometrial cancer.

4 Safety of vaginal oestrogen use for longer than 12 months

What is the safety of vaginal oestrogen use for longer than 12 months? **[2024]**

For a short explanation of why the committee made this recommendation for research, see the rationale section on genitourinary symptoms associated with menopause in people with no personal history of breast cancer.

Full details of the evidence and the committee's discussion are in evidence review B1: managing genitourinary symptoms (network meta-analyses).

5 Safety of vaginal oestrogen in terms of breast cancer recurrence

For people with a personal history of breast cancer, or at high familial or genetic risk of breast cancer, does vaginal oestrogen for genitourinary symptoms associated with menopause increase the risk of recurrence or incidence of breast cancer? **[2024]**

For a short explanation of why the committee made this recommendation for research, see the rationale section on genitourinary symptoms associated with menopause in people with a personal history of breast cancer.

Full details of the evidence and the committee's discussion are in in evidence review B2: managing genitourinary symptoms (breast cancer recurrence).

6 Impact of timing of HRT for menopause-associated symptoms on risk of coronary heart disease

Combined HRT

Does the person's age at menopause or the time between the person's menopause and their first use of HRT affect the long-term risk of coronary heart disease in people who take or have taken combined HRT? **[2024]**

For a short explanation of why the committee made this recommendation for research, see the rationale section on effect of combined HRT on specific health outcomes in people aged 45 or over.

Full details of the evidence and the committee's discussion are in evidence review C: cardiovascular disease and stroke.

Oestrogen-only HRT

Does the person's age at menopause or the time between the person's menopause and their first use of HRT affect the long-term risk of coronary heart disease in people who take or have taken oestrogen-only HRT? **[2024]**

For a short explanation of why the committee made this recommendation for research, see the rationale section on effect of oestrogen-only HRT on specific health outcomes in people aged 45 or over.

Full details of the evidence and the committee's discussion are in evidence review C: cardiovascular disease and stroke.

7 Vaginal laser treatment for genitourinary symptoms associated with menopause

What is the safety and efficacy of vaginal laser treatment for genitourinary symptoms associated with menopause? **[2024]**

For a short explanation of why the committee made this recommendation for research, see the rationale section on vaginal laser treatment.

Full details of the evidence and the committee's discussion are in evidence review B1: managing genitourinary symptoms (network meta-analyses).

8 Impact of HRT on health outcomes for trans men and non-binary people registered female at birth (who are not taking gender-affirming hormone therapy at the time of taking HRT or in the follow-up period)

What is the impact of HRT on health outcomes for trans men and non-binary people registered female at birth (who are not taking gender-affirming hormone therapy at the time of taking HRT or in the follow-up period) in relation to:

- cardiovascular disease
- stroke
- breast, endometrial and ovarian cancer
- dementia

- all-cause mortality? **[2024]**

For a short explanation of why the committee made this recommendation for research, see the rationale section on managing menopause in people who have taken gender-affirming hormone therapy in the past.

Full details of the evidence and the committee's discussion are in evidence review C: cardiovascular disease and stroke.

9 Impact of HRT on health outcomes for people from ethnic minority backgrounds

What is the impact of HRT on health outcomes for people from ethnic minority backgrounds in relation to:

- cardiovascular disease
- stroke
- breast, endometrial and ovarian cancer
- dementia
- all-cause mortality? **[2024]**

For a short explanation of why the committee made this recommendation for research, see the rationale section on effects of combined HRT on specific health outcomes in people aged 45 or over.

Full details of the evidence and the committee's discussion are in evidence review C: cardiovascular disease and stroke.

Other recommendations for research

10 People with a personal history of breast cancer

What is the safety and effectiveness of alternatives to systemic HRT as treatments for menopause-associated symptoms in people who have had breast cancer? **[2015]**

11 Effects of HRT on dementia risk

What are the effects of HRT use on the risk of dementia? **[2015, amended 2024]**

12 Premature ovarian insufficiency

What are the main clinical manifestations of premature ovarian insufficiency and the short- and long-term impact of the most common therapeutic interventions? **[2015]**

13 Breast cancer and venous thromboembolism

What is the impact of oestradiol in combination with the levonorgestrel-releasing intra-uterine system (LNG-IUS) on the risk of breast cancer and venous thromboembolism (VTE)? **[2015]**

14 Breast cancer recurrence

What is the impact of systemic HRT use in people with a previous diagnosis of breast cancer on the risk of breast cancer recurrence, mortality or the aggressiveness of the tumour? **[2015]**

Rationale and impact

These sections briefly explain why the committee made the recommendations and how they might affect practice.

Psychological support for early menopause

Recommendation 1.2.7

Why the committee made the recommendation

In the committee's experience, some people can be distressed by going through menopause at an earlier age than expected and earlier than their peers. If someone is experiencing emotional distress to a level that raises concerns, the committee agreed that they may need to be referred to psychology services.

How the recommendation might affect practice

It is common practice to provide psychological support to this group of people. While a potential referral will have a resource impact, support from psychology services will lead to improvements in quality of life and reduce future contacts with health services.

Return to recommendation

Identifying perimenopause and menopause

Recommendation 1.3.3

Why the committee made the recommendation

Evidence is lacking on the average age of menopause in people from ethnic minority backgrounds. However, the committee was aware, from experience, that people from some ethnic minority groups, and people with some lifelong conditions (for example, Down's syndrome), experience menopause at a younger age. The committee agreed it was important to raise awareness of this so that healthcare professionals can more easily

identify symptoms of menopause in ethnic minority populations or in people with lifelong conditions.

How the recommendation might affect practice

The recommendation will raise awareness that people from some ethnic minority groups, and those with some lifelong conditions, experience menopause at a younger age. It is unclear whether this will change clinical practice, but it might lead to earlier identification of menopause and earlier management of menopause symptoms.

Return to recommendation

Discussing management options with people aged 40 or over

Recommendations 1.4.1 to 1.4.4

Why the committee made the recommendations

Based on experience, the committee agreed that these basic principles of care would allow people to make an informed choice about management options:

- using an individualised approach with discussions about benefits and risks of any management option **and**
- tailoring information to individual circumstances and potential risk factors.

Hormone replacement therapy

The committee noted there are different ways of prescribing hormone replacement therapy (HRT) in terms of mode of administration, types of hormones, schedule, and individualised dose and duration. All these options influence benefits and risks so the best combination of them differs from one person to another and should be carefully chosen with, and for, each person. The committee agreed that clinicians should provide and discuss information about all this so that the person can take an active part in shared decision making.

Baseline risks of specific health outcomes and the benefits and risks of HRT also depend on a person's age at the start of perimenopause, as well as their individual circumstances and risk factors. It is particularly important to take age into account, for example, when thinking about the:

- risks of dementia or stroke with HRT **and**
- use of HRT in people experiencing early menopause.

The committee agreed it was essential to discuss duration of use when a person chooses to take HRT. It was decided that this was important because, even if the exact duration is unknown at the start, people would get an idea (from the clinician's knowledge about typical use) how long they may be taking HRT for and be made aware that this would be discussed again at reviews. The committee also agreed that it is impossible to recommend 1 specific duration of use because this would depend on several factors, including the reason for starting HRT and a person's medical history, age and symptoms. It was agreed that it was important to discuss continuation of HRT at every review because circumstances and preferences could change. The committee acknowledged that, in many people, menopause symptoms may return when HRT is stopped. They agreed this should also be discussed with the person in the context of duration of use. The person should also be aware that, if this happens, they could restart HRT, if this would still provide the best balance benefits and risks for them.

Cognitive behavioural therapy

Evidence showed that cognitive behavioural therapy (CBT) could be an option for some people with vasomotor symptoms, depressive symptoms or sleep problems. CBT could be used either alongside HRT or, for people for whom HRT is contraindicated or who prefer not to take it, instead of HRT. Several types of CBT (for example, online or group sessions) were found to be effective, but the evidence did not show that 1 option was better than another. The committee therefore recommended that the available options should be discussed with the person. They were also aware that some people needed information on what CBT involves. It was recognised that people have different preferences and needs and that these should be taken into account during these discussions (for example, reasonable adjustments may be needed for people with learning disabilities).

How the recommendations might affect practice

The recommendations reflect best practice principles for shared decision-making. The

recommendations will make healthcare professionals aware of what to discuss as part of this process.

Return to recommendations

Cognitive behavioural therapy for vasomotor symptoms

Recommendation 1.5.2

Why the committee made the recommendation

The committee based the recommendation on both the evidence and their expert knowledge. They looked at evidence on CBT compared with no intervention or to treatment as usual.

There was no evidence available for trans men and non-binary people registered female at birth. However, the committee agreed that the use of CBT for menopause-associated symptoms would be suitable for anyone, regardless of whether they have taken gender-affirming hormone therapy in the past. (This is also covered in the rationale on managing symptoms associated with menopause in people who have taken gender-affirming hormone therapy in the past.)

Overall, the evidence showed CBT was beneficial for women with vasomotor symptoms associated with menopause. The benefits related to 3 outcomes: the frequency of symptoms, severity of symptoms and how much the symptoms bothered the person (using a questionnaire that measured 'distress or bother'). The greatest effect was seen in how much symptoms bothered the person – many women felt their symptoms affected them less after taking part in CBT.

The committee also discussed the following limitations that affected the quality of the evidence:

- some concerns related to study design and to potential bias in the way studies were carried out
- uncertainties around outcomes, with different results being obtained for different

outcome measurement scales and subgroups

- uncertainties around how large the effect of CBT was, even when it was found to be effective.

For this reason, the committee decided to recommend CBT in addition to HRT, or as an option for people who prefer not to take HRT or for whom HRT is contraindicated. They also agreed the chosen CBT approach should be specifically designed for menopause symptoms.

How the recommendation might affect practice

These recommendations are a change to clinical practice. While wider use of CBT as an additional option could increase costs and add pressure to already limited services, especially in the short-term, it also gives people more choices for managing symptoms, including the option to have both CBT and HRT. This may lead to better outcomes.

The committee noted that there are long waiting times for CBT. They also noted that people currently trained in providing this kind of therapy may not be familiar with menopause-specific CBT, so training on this may incur costs and increase waiting times in the short term. However, online and group CBT may be easier and less costly to adapt to be menopause specific. There are also resources available to train people in providing menopause-specific CBT (that could also inform the adaptation of online CBT), which could facilitate implementation.

Currently, the treatment recommended for vasomotor symptoms associated with menopause is HRT. Access to CBT may address some health inequalities, providing other effective options for those who cannot or do not wish to use pharmacological treatments for menopause symptoms.

Return to recommendation

Genitourinary symptoms associated with menopause in people with no personal history of breast cancer

Recommendations 1.5.4 to 1.5.12

Why the committee made the recommendations

The committee discussed evidence from network meta-analyses (NMA) which looked at a number of management options for specific subtypes of genitourinary symptoms associated with menopause such as vaginal dryness, pain with sex, and vulvovaginal discomfort or irritation. They also took into account evidence from the health economic model developed for the 2024 update of this guideline.

There was no evidence available for trans men and non-binary people registered female at birth. The committee agreed that their conclusion from the available evidence could be extended to those who have never taken gender-affirming hormone therapy. But they did not think they could be extended to those who have taken this type of therapy in the past, because it is not known whether such therapy would alter the benefits and risks of any management option (especially hormonal treatments), or which management option might be best for the person.

Evidence showed that vaginal oestrogen (particularly estriol but also oestradiol) was effective in reducing vaginal dryness and pain with sex. Estriol also showed effectiveness in reducing vulvovaginal discomfort or irritation. The economic model conducted for this review showed that vaginal oestrogen was cost-effective.

There was limited evidence on long-term use of vaginal oestrogen preparations. However, the committee acknowledged that efficacy and tolerability would be assessed regularly, as per the recommendations on reviewing treatment.

To gain a better understanding of it, the committee made a recommendation for research on the safety of vaginal oestrogen when used for more than 12 months.

Based on their expertise, the committee agreed that what is known about the safety of long-term use should be taken into account and discussed with the person before offering vaginal oestrogen. They agreed that the following points should also be brought up:

- Serious adverse effects from vaginal oestrogen are rare. For example, the committee was aware of the 2019 Medicines and Healthcare products Regulatory Agency drug safety update on HRT safety advice, which states that there is no evidence of an effect of vaginal oestrogen on breast cancer risk. This was consistent with the findings from the NMA, which showed that discontinuation due to adverse events was relatively low.

- In the committee's experience, people are not always aware that symptoms often return when vaginal oestrogen is stopped.
- Because absorption into the bloodstream is minimal, there is no need to combine vaginal oestrogens with systemic progestogen treatment to protect the person against endometrial hyperplasia and cancer (whereas, with systemic HRT, people with a uterus need progestogen treatment for protection – see the rationale section on starting and stopping HRT).

Preparations were not all shown to be equally effective. However, there were also uncertainties around the differences observed. So, the committee agreed that, overall, it was unlikely that 1 type of vaginal oestrogen preparation would be more effective than another. They concluded that people with genitourinary symptoms associated with menopause should be given different options for vaginal oestrogen preparations so they could choose the 1 they prefer.

The committee thought that people did not always realise that moisturisers or lubricants can be used alone or in addition to vaginal oestrogen and, therefore, thought that this information should be included in discussions about management options.

The NMA suggested that non-hormonal vaginal moisturisers and lubricants were less effective than vaginal oestrogen, but a smaller proportion of people stopped using their treatment when using non-hormonal vaginal moisturisers or lubricants than when using other types of treatments. This may suggest that, when non-hormonal vaginal moisturisers and lubricants worked for a person, the person felt comfortable to keep using them (for example, because these are readily available over the counter options). While the evidence highlighted uncertainty around the effectiveness of non-hormonal moisturisers and lubricants, based on their experience, the committee decided that moisturisers and lubricants could be tried when vaginal oestrogen is contraindicated or not preferred.

The committee discussed the role of vaginal prasterone and oral ospemifene in the management of genitourinary symptoms associated with menopause. They noted that both these medicines are more expensive than vaginal oestrogen, moisturisers or lubricants. However, the NMA showed them to be effective in reducing vaginal dryness and pain with sex but not vulvovaginal discomfort or irritation. They were also seldom discontinued because of adverse events.

The economic model showed vaginal prasterone was not cost-effective as a first-line option. However, given its clinical effectiveness, the committee agreed that it could be

offered as a second-line management option when other options (vaginal oestrogen, or non-hormonal moisturisers or lubricants) are ineffective for persisting genitourinary symptoms or are not tolerated.

Evidence showed that ospemifene was not cost-effective and could therefore not be recommended as a first-line treatment option for all people with genitourinary symptoms associated with menopause. However, the committee noted that, for some people, local application of vaginal oestrogen may be impractical. For example, people with physical or intellectual disabilities may find it difficult to use local vaginal oestrogen. Ospemifene is an oral tablet and should therefore be considered as an option in such specific circumstances.

The committee was aware that the symptoms of overactive bladder can occur alongside genitourinary symptoms associated with menopause and that vaginal oestrogen can be given in these circumstances. They decided not to include people with a personal history of breast cancer in the recommendation on this because vaginal oestrogen is not the first-line treatment for genitourinary symptoms associated with menopause in this population.

How the recommendations might affect practice

The evidence showed that the most cost-effective option for the treatment of genitourinary symptoms associated with menopause is vaginal oestrogen, which is routinely offered in current practice. The recommendations will standardise practice rather than change it.

Return to recommendations

Genitourinary symptoms associated with menopause in people with a personal history of breast cancer

Recommendations 1.5.13 to 1.5.18

Why the committee made the recommendations

The committee acknowledged that evidence was sparse, with only 4 studies providing information on breast cancer recurrence in people with a personal history of breast cancer

taking vaginal hormone treatment for genitourinary symptoms associated with menopause. The committee also had methodological concerns about some of the studies, particularly about:

- how they accounted for confounding factors (including how many factors, which factors and how they accounted for these factors in their analysis of data) **and**
- duration of follow-up, which was not long enough to capture breast cancer recurrence.

There was no evidence available for trans men and non-binary people registered female at birth. The committee agreed that their conclusion from the available evidence could be extended to those who have never taken gender-affirming hormone therapy. But they did not think they could be extended to those who have taken this type of therapy in the past, because it is not known whether such therapy would alter the benefits and risks of any management option (especially hormonal treatments), or which management option might be best for the person.

The committee discussed the evidence comparing vaginal oestrogen to no treatment in women with a personal history of breast cancer. Most of the evidence included all women together and so did not distinguish between those who used adjuvant treatment for breast cancer and those who did not. Based on this evidence, it is not possible to say with certainty whether vaginal oestrogen, when used for genitourinary symptoms associated with menopause, leads to any change in breast cancer recurrence or not.

The uncertainties around the evidence also led the committee to agree that:

- The first choice for people with a personal history of breast cancer and genitourinary symptoms associated with menopause should be non-hormonal moisturisers and lubricants.
- Vaginal oestrogen should only be considered as a second-line option, when non-hormonal treatment has not been effective, and symptoms continue to impact negatively on the person's quality of life. The committee noted that people may not realise that non-hormonal moisturisers and lubricants could also be used in combination with vaginal oestrogen, so they agreed to highlight this.

The committee made these recommendations because:

- non-hormonal treatment may be less effective than local hormonal treatment **but**

- although it is important to treat menopause-associated symptoms, the risk of breast cancer recurrence is a greater concern.

The committee advised that the mechanism of action of aromatase inhibitors makes genitourinary symptoms likely. However, the mechanism of action of tamoxifen is less likely to cause genitourinary symptoms and may even alleviate some of them. Vaginal oestrogen may also lessen the efficacy of aromatase inhibitors.

The committee agreed it could not be confident about the evidence on the safety of local vaginal oestrogens in those taking either tamoxifen or aromatase inhibitors. This was because of:

- concerns about the quality of the evidence **and**
- lack of data comparing the risk of breast cancer recurrence in people taking aromatase inhibitors alone with the same risk in people taking vaginal oestrogen (the comparison was aromatase inhibitor versus aromatase inhibitor plus vaginal oestrogen).

For this reason, the committee agreed that, if vaginal oestrogen is considered for people on aromatase inhibitors as an adjuvant treatment, treatment options should be discussed with a breast cancer specialist (for example, this may include switching to tamoxifen).

The committee noted that treatment decisions would need to be tailored to each person because:

- Some people have a lower risk of breast cancer recurrence than others (as covered by NICE's guideline on early and locally advanced breast cancer). The committee decided that this was an important factor because it is worse to potentially add to the risk of those who already have a high risk than those who have a low risk of recurrence.
- Vaginal oestrogen is absorbed locally. Some of it is absorbed systemically, that is, further into the body, but, compared with systemic HRT, the amount is minimal, and so it may or may not be a sufficient amount to affect breast cancer recurrence. This makes it difficult to assess the safety of vaginal oestrogen with respect to breast cancer recurrence.

In someone with an oestrogen receptor negative breast cancer, oestrogen does not affect the growth of cancer cells, but in someone with an oestrogen receptor positive breast cancer, it increases the risk of recurrence.

In someone with an oestrogen receptor positive breast cancer taking adjuvant treatment:

- if this treatment inhibits the production of oestrogen (in the ovaries or in fat or muscle tissues), it will have no effect on any oestrogen coming from a source outside the body, and this oestrogen would then be able to bind to cancer cells and stimulate their growth **but**
- if this treatment stops oestrogen from binding to oestrogen receptors (regardless of whether the oestrogen is produced by the body or absorbed from some treatment), it will stop oestrogen, regardless of source, from binding to receptors on cancer cells and so their growth will not be stimulated.

There was relatively little evidence for the use of vaginal oestrogen to manage genitourinary symptoms associated with menopause after breast cancer, particularly related to long-term use and use in conjunction with adjuvant therapy. Therefore, the committee made a recommendation for research on the safety of vaginal oestrogen in terms of breast cancer recurrence.

People who carry genetic variants that increase the risk of breast cancer

No evidence on the use of vaginal oestrogen was identified for people who carry genetic variants that increase the risk of breast cancer. The committee therefore decided that it could not make a recommendation but made a recommendation for research on the safety of vaginal oestrogens for people who have a high genetic risk of breast cancer.

How the recommendations might affect practice

The recommendation about the use of non-hormonal treatment options as first-line treatment for people with a personal history of breast cancer and genitourinary symptoms associated with menopause is in line with current practice. There is variation in:

- the clinical factors taken into account when considering local vaginal oestrogens after an ineffective first-line treatment
- when to seek specialist oncology advice
- what is discussed with people, particularly around the uncertainty of the evidence.

The recommendations will standardise practice.

Return to recommendations

Vaginal laser treatment

Recommendation 1.5.19

Why the committee made the recommendation

The committee made a recommendation on vaginal laser treatment that applies to people with genitourinary symptoms associated with menopause, regardless of whether they have a personal history of breast cancer.

The evidence showed that laser treatment was effective for all outcomes. However, the committee agreed that, despite some promising results, the evidence base was too small. In addition, laser treatment has a potential for harm (for example, scarring) and evidence showed it was not cost-effective. As a result, it should only be offered in the context of research. The committee also made a recommendation for research on vaginal laser treatment to address this.

There was no evidence available for trans men and non-binary people registered female at birth. The committee agreed that their conclusion from the available evidence could be extended to those who have never taken gender-affirming hormone therapy. But they did not think they could be extended to those who have taken this type of therapy in the past, because it is not known whether such therapy would alter the benefits and risks of any treatment (especially hormonal treatments), or which treatment option might be best for the person.

How the recommendation might affect practice

Laser treatment was not included in the previous version of this guideline, but the recommendation to only consider it in the context of research will not affect practice.

Return to recommendation

Management options for depressive symptoms or depression in people with menopause-associated

symptoms

Recommendations 1.5.21 and 1.5.22

Why the committee made the recommendations

The committee made recommendations based on the evidence which looked at CBT compared with no treatment or to treatment as usual, in the context of menopause. The common criteria used in all studies to show that women had experienced or were approaching menopause was the presence of vasomotor symptoms.

There was no evidence available for trans men and non-binary people registered female at birth. However, the committee agreed that the use of CBT for menopause symptoms would be suitable for anyone, regardless of whether they have taken gender-affirming hormone therapy in the past. (For more details, see the rationale on managing symptoms associated with menopause in people who have taken gender-affirming hormone therapy in the past.)

There were many different scales and measurements for mental health-related symptoms, and, in the context of menopause:

- most of the evidence on depressive symptoms showed no difference between CBT and the comparison groups (no treatment or treatment as usual)
- some evidence showed that CBT improved mood in women with depressive symptoms
- no evidence showed that CBT might make depressive symptoms any more severe.

There were some concerns about the evidence. These related to study design and to biases in the way studies were carried out. There were also uncertainties around:

- the outcomes, with different results being obtained for different outcome measurement scales and subgroups **and**
- how large the effect of CBT was, even when it was found to be effective.

However, the committee acknowledged that the overall effectiveness of CBT for depressive symptoms is established (see NICE's guideline on depression in adults). For this reason, they agreed that CBT should be a management option for depressive symptoms associated with vasomotor symptoms.

If depression is suspected or diagnosed, the committee noted that the optimal treatment plan can only be achieved by following both this menopause guideline and NICE's guideline on depression in adults.

How the recommendations might affect practice

These recommendations could lead to a change to clinical practice. Wider use of CBT could increase costs and add pressure onto already limited services, especially in the short term. However, it also gives people more management choices, including the option to have both CBT and HRT. Having more options may result in better outcomes.

There are currently long waiting times for CBT. However, the use of online and group CBT may make it easier and less costly to introduce CBT for depressive symptoms associated with menopause, where this option is not already in place.

Return to recommendations

Cognitive behavioural therapy for sleep problems associated with menopause

Recommendation 1.5.23

Why the committee made the recommendation

The committee based the recommendation on the evidence on CBT compared with no treatment or compared with treatment as usual.

There was no evidence available for trans men and non-binary people registered female at birth. However, the committee agreed that the use of CBT for menopause symptoms would be suitable for anyone, regardless of whether they have taken gender-affirming hormone therapy in the past. (For more details, see the rationale on managing symptoms associated with menopause in people who have taken gender-affirming hormone therapy in the past.)

Evidence showed CBT improved sleep quality, but this varied depending on the scale used to measure sleep disturbances. The committee agreed it was difficult to define difficulties with sleep, but the evidence showed that CBT was beneficial for various aspects of sleep,

as defined by each scale (for example, the measures contributing to scales included the number of hours of sleep per night, how long it takes to fall asleep and the number and duration of night-time awakenings; there were also some specific scales for insomnia). The committee acknowledged there may be other options to manage difficulties with sleep associated with menopause. NICE will monitor evidence on these for a future update. While not all the CBT approaches used in the evidence were specifically developed for menopause-associated symptoms, the committee agreed that this kind of CBT would be more effective given that the evidence showed that:

- the women with sleep problems also had vasomotor symptoms which can negatively impact sleep **and**
- menopause-specific CBT was also beneficial for the management of vasomotor symptoms.

The committee agreed that the evidence had some limitations, including uncertainties around:

- outcomes, with different results being obtained for different outcome measurement scales and subgroups
- how large the effect of CBT was, even when it was shown to be effective.

The committee also had concerns around study design and biases around how studies were carried out.

As a result, they recommended CBT as an option rather than as routine management for sleep problems associated with menopause.

How the recommendation might affect practice

These recommendations could lead to a change to clinical practice. Although increased use of CBT could have a resource impact and add pressure to already limited services, especially in the short term, it also provides more management choices, including the option to have both CBT and other treatments (including HRT). This may lead to better outcomes.

There are currently long waiting lists for CBT and people who are already trained in this type of therapy may need further training before they can provide menopause-specific

CBT. However, the use of online or group CBT may make it easier and less costly to adapt as menopause-specific CBT. The committee was aware of existing resources that can be used to train people in providing menopause-specific CBT (including adapting online CBT). They agreed that this would facilitate implementation.

Return to recommendation

Taking medical history of coronary heart disease or stroke into account before offering treatment

Recommendation 1.5.29

Why the committee made the recommendation

For people with a history of coronary heart disease or stroke, the committee agreed that different risk factors mean that people have different baseline levels of risk. They concluded that decisions on HRT use for menopause-associated symptoms would need to be tailored to the person and their particular risk factors and risk levels and that, therefore, these decisions should be made with a healthcare professional with expertise in menopause.

How the recommendation might affect practice

It is current practice that people with pre-existing conditions get expert advice on HRT as a treatment option for menopause-associated symptoms. However, there is variation in which expert would be consulted on this. This recommendation will standardise practice.

Return to recommendation

Managing menopause-associated symptoms in people who have taken gender-affirming hormone therapy in the past

Recommendations 1.5.34 and 1.5.35

Why the committee made the recommendations

The committee noted a lack of evidence on HRT use in trans men and non-binary people registered female at birth who have taken gender-affirming hormone therapy in the past. This uncertainty means that, for example, it is not known whether past hormone treatment could influence the choice of HRT, or whether giving HRT to someone who previously had hormone therapy would alter their health risks. For this reason, the committee agreed that trans men and non-binary people registered female at birth who have taken gender-affirming hormone therapy in the past should be able to discuss their menopause-associated symptoms with a healthcare professional with expertise in menopause. They can then make a shared decision about any potential treatment the person may wish to have. Because of the lack of evidence, the committee also made a recommendation for research on the impact of HRT on health outcomes for trans men and non-binary people registered female at birth, which covers people who have never taken gender-affirming hormone therapy, or who have taken it in the past but are not currently taking it.

The committee discussed the evidence related to CBT. This did not include evidence related to trans men or non-binary people registered female at birth. However, the committee agreed that the use of CBT for menopause symptoms would be suitable for any person, regardless of whether they have taken gender-affirming hormone therapy in the past.

The committee decided to make a specific recommendation for trans men and non-binary people registered female at birth who have taken gender-affirming hormone therapy in the past to promote equality in access to CBT services for managing menopause-associated symptoms within these groups, acknowledging their unique experiences and needs. Because, without further evidence, other recommendations in this guideline cannot be extended to these groups, the committee agreed that a separate recommendation would highlight CBT as a management option for these groups.

How the recommendations might affect practice

In the committee's experience, there is no clear current practice related to the treatment of menopause-associated symptoms in people who have taken gender-affirming hormone therapy in the past. The committee agreed that access to both advice from a healthcare professional with expertise in menopause and to CBT were a matter of equality and inclusivity.

The recommendations may increase the number of referrals both to healthcare professionals with expertise in menopause, and for CBT. The committee noted that there is pressure on services providing CBT. However, the recommendations should also lead to more appropriate care and improved outcomes for people who have had gender-affirming hormone therapy in the past.

Return to recommendations

Effect of HRT on life expectancy in people aged 45 and over

Recommendation 1.6.1

Why the committee made the recommendation

The committee discussed the evidence on the impact of HRT on all-cause mortality (life expectancy). The multitude of confounding factors that may affect life expectancy meant that evidence had to be restricted to randomised controlled trials (RCTs). This is because, in RCTs, participants are randomly assigned to different treatment groups, which helps control known and unknown confounders.

The committee noted that high-quality evidence showed no difference in mortality with either oestrogen-only or combined HRT compared with not taking HRT. They agreed that this was an important finding and therefore emphasised the need to tell people thinking about either treatment option that taking combined or oestrogen-only HRT is unlikely to affect life expectancy.

The committee looked at the analysis for groups of women starting HRT at different ages. They noted that, for most age groups, there was no difference in mortality between those who are taking or have taken HRT compared with placebo. There was also no significant variation in this difference depending on the age of starting HRT.

A decrease in all-cause mortality was reported for 1 isolated subgroup (women starting oestrogen-only HRT aged between 50 and 59). In isolation, this was a statistically significant figure. But in a wider context, it cannot be interpreted as good evidence of a different effect in this group. This is because:

- there was no identifiable pattern of change in risk as people aged **and**
- the statistical analysis showed that any differences observed between age groups could be down to random chance and therefore did not represent a real difference between age groups.

As a result, the committee did not refer to this decrease in all-cause mortality in the recommendation.

How the recommendation might affect practice

It is current practice to discuss benefits and risks with people when treatment options are being considered. The effect of treatment on life expectancy is an important part of these discussions and was not covered in the previous version of this guideline. The recommendations will standardise the information that will be given. But it is unclear how this will change the treatment choices made and how this will impact on practice.

Return to recommendation

Effect of combined HRT on specific health outcomes in people aged 45 or over

Recommendation 1.6.2 and table 1

What this rationale covers

The committee highlighted the importance of presenting people with a complete picture of benefits and risks associated with HRT to enable shared and informed decision making.

This rationale briefly describes the available evidence on combined HRT and how it affects risks related to:

- cancer: breast
- cancer: endometrial
- cancer: ovarian
- coronary heart disease

- stroke
- dementia.

It also covers other considerations related to cardiovascular disease, and the need for further research in this area.

There was no evidence available for trans men and non-binary people registered female at birth. The committee agreed that their conclusion from the available evidence could be extended to those who have never taken gender-affirming hormone therapy. But they did not think it could be extended to those who have taken this type of therapy in the past, because it is not known whether such therapy would alter the benefits and risks of any treatment (especially hormonal treatments), or which treatment option might be best for the person. So, they made a recommendation for research on the impact of HRT on health outcomes for these groups. Combined and oestrogen-only HRT are prescribed to different groups of people, and so the committee looked separately at the benefits and risks associated with the 2 types of HRT.

Why the committee made this recommendation

Cancer: breast

In line with other NICE guidance, the committee agreed that advice needs to be tailored to the person according to their individual risk factors, such as having a family history of breast cancer, living with overweight, or drinking alcohol. The committee acknowledged that people also need to be made aware that these factors will affect absolute risks of breast cancer both when not taking and when taking HRT.

The committee discussed evidence on the effect of taking HRT on breast cancer incidence and breast cancer-related mortality that came from:

- randomised controlled trials (RCTs) **and**
- a meta-analysis of individual patient data from observational studies.

Overall, it showed the risk of breast cancer incidence was consistently greater with combined HRT than with oestrogen-only HRT. The committee therefore looked in more detail at how combined HRT or oestrogen-only HRT each might affect the risk of breast cancer.

RCT evidence

Evidence from RCTs showed an increased risk of breast cancer incidence for women who are taking or have taken combined HRT compared with women taking placebo. The group included in the trial took combined HRT for approximately 6 years and was followed up for breast cancer for about 7 years after the trial ended.

The evidence showed that, with combined HRT, breast cancer risk was increased regardless of ethnicity or whether there was a family history of breast cancer.

Observational study evidence

Evidence from observational studies was consistent with evidence from the RCTs but provided further information on the duration and recency of use. It showed that, for women who were taking combined HRT, the risk of breast cancer incidence:

- was higher than in those who did not take HRT
- started increasing in the first year of use
- increased with duration of use.

For women who had taken combined HRT in the past, it showed that the risk of breast cancer incidence:

- remained higher than for women who did not take HRT
- was greater the longer women had used combined HRT
- reduced after stopping HRT but was still increased for as long as at least 10 years after stopping use.

The evidence showed that breast cancer risk with sequential combined HRT is lower than with continuous combined HRT but is higher than without HRT. The committee therefore decided that this should be discussed as part of shared decision making so that people can make an informed choice.

All types of progestogen were associated with an increased risk of breast cancer incidence, although there was limited evidence on the risk of breast cancer incidence with micronised progesterone or dydrogesterone. Overall, there was insufficient evidence to

say whether micronised progesterone or dydrogesterone may lead to a different risk of breast cancer incidence and therefore the committee made a recommendation for research on whether different types of progestogen in HRT alter breast cancer risk.

It was unclear from the evidence whether, for people who take HRT, the risk of breast cancer changes with the mode of administration. The committee therefore made a recommendation for research on modes of administration for systemic HRT.

Mortality related to breast cancer

Both RCT and observational evidence showed that mortality from breast cancer was slightly higher in women who have taken combined HRT than in those who have not taken HRT. The committee agreed that a difference in breast cancer mortality would be consistent with an increase in breast cancer incidence and agreed that this should be explained to people. However, they also emphasised that the difference in risk:

- is very small between those who have taken HRT and those who have not **and**
- should be thought about within the wider context, in that there is no overall change in life expectancy with HRT.

Return to recommendation

Cancer: endometrial

The committee discussed evidence from RCTs and observational studies.

Some of the RCT evidence showed that using continuous combined HRT decreased the risk of endometrial cancer for women taking combined HRT, compared with women not taking HRT.

For women currently taking continuous combined HRT, with any duration of use, some observational studies showed a reduced risk of endometrial cancer while others showed that there was no difference in risk of endometrial cancer compared with women not taking HRT.

The committee discussed the well-established association between oestrogen-only HRT and the risk of endometrial cancer. They agreed it was important to explain to people with a uterus that:

- this is why they would be offered combined HRT as per recommendation 1.8.1 in the section on starting HRT **but**
- although oestrogen has an adverse effect on the endometrium when used on its own, progestogens counteract this in a dose-dependent manner.

They concluded that continuous combined HRT, where progestogen is taken every day with oestrogen, decreases the risk of endometrial cancer.

Evidence from another observational study showed that sequential combined HRT, when used for 10 years or more, increases the risk of endometrial cancer, but not when it is used for less than 10 years. Based on their own knowledge and experience, the committee agreed that the risk is likely to increase slowly over time. They agreed that, with sequential combined HRT, the protective effect of progestogen increases with the number of days on which progestogen is taken every month.

Because the way sequential HRT is taken may vary in duration of use, days of progestogen per cycle, and oestrogen dose, the committee decided to highlight how different sequential HRT regimens and duration of use affect the risk of endometrial cancer. However, they recognised that, overall, this corresponded to a very slight increase in the absolute risk of endometrial cancer.

Return to recommendation

Cancer: ovarian

The committee discussed the evidence from RCTs as well as from observational studies.

Overall, evidence from an RCT showed that there were more ovarian cancer cases in people taking combined HRT than in people not taking HRT, but the difference was not statistically significant. The committee noted that the number of people diagnosed with ovarian cancer was very small in both groups and this made the evidence less robust.

The observational evidence showed that the risk of ovarian cancer increased with HRT use. The committee noted that both the number of participants and the number of diagnosed cases of ovarian cancer were far larger in the observational evidence than in the RCT, which made the findings more robust.

However, the committee agreed that, although the risk was increased overall, the risk was

small in absolute terms, especially with the low baseline risk of ovarian cancer. Overall, there was an increase in ovarian cancer incidence by 1 in 1,000. The committee agreed that all of this should be explained when HRT is being considered.

Return to recommendation

Coronary heart disease

The committee based their recommendations on evidence from RCTs and observational studies.

The majority of the RCT and observational evidence both showed that the risk of coronary heart disease did not increase when taking HRT. The committee agreed this information should be shared with people to allow them to make an informed decision.

The committee also discussed the evidence on the possible impact of 2 factors:

- the length of time between menopause and first use of HRT
- duration of HRT use.

They looked at coronary heart disease risk for different subgroups, and at the statistical significance of any differences observed between these subgroups. As a result, they agreed they could not make any recommendations about the impact of either of these factors on coronary heart disease risk in people taking HRT. This is because there were:

- no statistically significant subgroup differences in the RCT evidence **and**
- inconsistent results between different observational studies.

Findings from the RCT evidence did not all lead to the same conclusions.

For coronary heart disease and cardiac event composite scores, most RCT evidence showed no difference between combined HRT and placebo. This was shown for both continuous and sequential HRT.

However, some isolated results were not in line with this overall trend, but for most of them:

- the isolated results were not statistically significant **or**

- the difference between the group in which these results were obtained and other subgroups was not statistically significant.

See evidence review C: cardiovascular disease and stroke for further discussion of this.

Mortality related to coronary heart disease

The committee looked at RCT and observational study evidence which showed that, for women with no history of coronary heart disease, there was no increase in mortality from cardiovascular disease from taking HRT. They agreed that it was important for people to know this so they could make an informed choice.

Return to recommendation

Stroke

The committee based their recommendations on RCTs and observational studies.

Evidence showed a significant difference in risk depending on the mode of administration. The use of combined HRT does not increase the risk of stroke when the oestrogen component is taken transdermally, but it does increase the risk if it is taken orally. These findings were supported by observational evidence. The committee decided that it was important to share this information so that it could be taken into consideration.

However, national statistics show that the baseline risk for stroke in women aged under 60 is very low. The committee agreed that this should be explained to anyone thinking about HRT because the risk may remain small despite any change in risk reported in the RCT and observational study findings.

RCT evidence

The RCTs showed that, overall, there is an increased risk of stroke in women currently taking combined HRT with oral oestrogen.

Evidence on duration of use showed that risk of stroke:

- did not increase when combined HRT was used for up to 4 years **but**
- increased when combined HRT was taken for 5 to 9 years.

Evidence related to age at starting combined HRT containing oral oestrogen also showed a greater risk of stroke in women currently taking HRT. This risk increased with age at starting HRT (that is, the older people were when they started taking HRT). This was when HRT was taken for 5 to 9 years.

Evidence also showed significant differences in the risk of stroke depending on ethnicity. Among those taking combined HRT, the risk of stroke was greater in women of Black ethnicity compared with people from other backgrounds, though numbers of people affected by stroke in all ethnic minority groups were small. Because of the small size of the population taking part in the trials, the evidence was not very robust, so the committee reflected this uncertainty by explaining that the risk 'may' be greater for Black people. The committee agreed that all of this should be explained to people from ethnic minority backgrounds to help them reach a decision.

Observational evidence

Observational evidence on oral oestrogen doses as part of combined HRT, when compared with not taking HRT, showed:

- an increased risk of stroke in women taking continuous combined HRT when the oestrogen dose was high **and**
- no difference in risk when the oestrogen dose was lower.

Return to recommendation

Impact of timing of HRT for menopause symptoms on risk of coronary heart disease

There was not a lot of data to check whether the following factors impact on risk of coronary heart disease:

- the age of the person when they start HRT **and**
- the time between a person's menopause and when they start HRT.

This resulted in what is called 'lack of statistical power'. In other words, the lack of data means that statistical test could show a difference where there is none.

In what little data was available, the risk did not have a clear tendency to decrease or increase with either of the above 2 factors (that is, with the age of the person when they start HRT or the time between a person's menopause and when they start HRT).

As a result, the committee decided to make a recommendation for research on the impact of timing of HRT on risk of coronary heart disease.

Impact of the type of progestogen in combined HRT on cardiovascular disease risk

There was insufficient evidence to conclude whether, as part of HRT, different progestogens had different impact on risk of cardiovascular disease. The committee made a key recommendation for research on different types of progestogen.

Impact of mode of administration of combined HRT on coronary heart disease

There was insufficient evidence on whether 1 mode of administration of combined HRT differed to another in its impact on risk of coronary heart disease. The committee therefore made a key recommendation for research on different modes of administration.

Risk of cardiovascular disease with HRT in people from ethnic minority backgrounds

The committee noted that there was little evidence on how HRT affects people from ethnic minority backgrounds in terms of cardiovascular health and stroke (as well as all other health outcomes), so they made a recommendation for research on the impact of HRT on health outcomes for these groups of people.

Other considerations relating to cardiovascular disease

The committee were aware of systematic reviews by Boardman et al. (2015), Kim et al. (2020) and Salpeter et al. (2006) – see the list of excluded studies in evidence review C: cardiovascular disease and stroke. These 3 systematic reviews did not meet the inclusion criteria of NICE's 2024 evidence review because:

- they combined data for participants who received combined HRT and oestrogen-only HRT (Boardman et al. 2015) **or**

- some individual studies included within a review did not match NICE's 2024 criteria and therefore the entire systematic review could not be included (Kim et al. 2020 and Salpeter et al. 2006).

The studies included in these systematic reviews were checked and any that matched the relevant criteria were included in NICE's 2024 evidence review.

However, the committee did comment on whether the conclusions made in NICE's 2024 evidence review aligned with the findings of these 3 systematic reviews. Although there were differences observed in certain areas, none of them challenged the overall conclusion that HRT does not increase coronary heart disease risk.

Dementia

The committee noted that there was relatively little evidence on dementia compared with other health outcomes, with only 7 studies identified. They acknowledged that most of the evidence was from observational studies and so they very carefully looked at how various confounders had been adjusted for.

The committee agreed that some of the evidence did not make the necessary adjustments for confounding factors, such as socioeconomic status, or did not reliably ascertain incidence of dementia.

To guide their discussions and support the recommendations, the committee agreed to focus on 2 observational studies, 1 from the UK and the other from Denmark (which both made the most appropriate adjustments for confounders). They also focused on the Women's Health Initiative Memory Study (WHIMS) of women starting HRT over the age of 65, which is based on data from an RCT from the Women's Health Initiative (WHI).

The committee agreed that the evidence from the 2 observational studies was inconsistent:

- One study showed no difference in risk of dementia between combined HRT use and no HRT, with different durations of use.
- The other study showed an increase in incidence of dementia with combined HRT use when compared with no HRT, and the risk increased with duration of use.

The committee agreed that, although both studies adjusted for many relevant

confounders, neither adjusted for all. They concluded that the evidence might be at risk of bias from confounding.

They noted that the evidence was for all types of dementia. The risk for some types of dementia may be different to others, and the proportion of each type identified at follow-up may differ for each study. The committee thought this may explain some of the differences in risk.

Evidence from the WHIMS study on combined HRT compared with placebo was inconsistent with the observational evidence from the UK, but in line with that from Denmark (showing an increased risk in dementia in the HRT group). They also noted that the population was different from a typical group of people taking HRT, in that they first started taking HRT at age 65 or over.

The committee were not unanimous in their interpretation of the evidence and how to formulate a recommendation best reflecting the evidence base. Some members of the committee had concerns about highlighting a risk of dementia when evidence from a UK setting showed no difference in risk.

However, the committee reached a majority decision. Taking all evidence into account, they decided the evidence pointed towards a possible increased risk in dementia incidence if HRT is started at a later age. They agreed it was important that people thinking about HRT for menopause-associated symptoms should be made aware of this, so that they could make an informed decision.

As part of this, the committee:

- chose to use the word 'might' to express uncertainty, given the differences between study results
- agreed that it was important to highlight, based on the WHIMS evidence, the increase in risk that was noted when HRT was started over 65 years of age.

Recommendations for research

The committee recognised that there are still uncertainties around the current evidence base and that further research is needed. They noted that the previous version of the guideline included a recommendation for research related to dementia and decided to keep this.

The evidence was unclear about the impact of mode of administration on risk of dementia. The committee therefore prioritised a recommendation for research on mode of administration for systemic HRT.

Return to recommendation

How the recommendation might affect practice

It is current practice to discuss benefits and risks with people when thinking about treatment options. The recommendation will standardise and update the information that will be shared. While the 2024 version of this guideline includes some new or updated information to share, it is unclear how this will affect treatment choices and impact on practice.

It is possible that the recommendation may increase the use of transdermal HRT, given that it was not associated with an increased risk of stroke (and, according to 2015 recommendations that were not reviewed in 2024, it is also associated with a lower risk of venous thromboembolism than oral preparations).

Return to recommendation

Effect of oestrogen-only HRT on specific health outcomes in people aged 45 or over

Recommendation 1.6.3 and table 2

What this rationale covers

The committee agreed that people should be presented with a complete picture of benefits and risks associated with HRT to enable shared, and informed, decision making.

This rationale briefly describes the available evidence on oestrogen-only HRT and how it affects risks related to:

- cancer: breast
- cancer: endometrial

- cancer: ovarian
- coronary heart disease
- stroke
- dementia.

It also covers other considerations related to cardiovascular disease, and the need for further research in this area.

There was no evidence available for trans men and non-binary people registered female at birth. The committee agreed that their conclusion from the available evidence could be extended to those who have never taken gender-affirming hormone therapy. But they did not think it could be extended to those who have taken this type of therapy in the past, because it is not known whether such therapy would alter the benefits and risks of any management option (especially hormonal treatments), or which management option might be best for the person. So, they made a recommendation for research on the impact of HRT on health outcomes for these groups.

Combined and oestrogen-only HRT are prescribed to different groups of people, as per recommendation 1.8.1, and so the committee looked separately at the benefits and risks associated with the 2 types of HRT.

Why the committee made this recommendation

Cancer: breast

In line with other NICE guidance, the committee agreed that advice needs to be tailored to the person according to their individual risk factors, such as having a family history of breast cancer, living with overweight, or drinking alcohol. The committee acknowledged that people also need to be made aware that these factors will affect absolute risks of breast cancer both when not taking and when taking HRT.

The committee discussed evidence on the effect of taking HRT on breast cancer incidence and breast cancer mortality that came from:

- randomised controlled trials (RCTs) **and**

- a meta-analysis of individual patient data from observational studies.

Overall, it showed the risk of breast cancer incidence was consistently greater with combined HRT than with oestrogen-only HRT. Only women, trans men and non-binary people who have had a hysterectomy are eligible to take oestrogen-only HRT, so most people taking HRT will take combined HRT.

The committee discussed the evidence from the analysis of different durations of use of oestrogen-only HRT versus no HRT or versus placebo.

RCT evidence

RCT evidence showed a reduced risk in the incidence of breast cancer for women who are taking, or have taken, oestrogen-only HRT compared with women taking placebo. Women taking oestrogen-only HRT as part of the trial took it for approximately 6 years and were followed up for breast cancer for 7 years after the trial ended.

The evidence showed the risk was reduced regardless of ethnicity. There was insufficient data to detect whether having or not having a family history of breast cancer lead to a different level of breast cancer risk with oestrogen-only HRT.

Observational study evidence

Evidence from observational studies was not consistent with the RCT evidence but provided further information on the duration and recency of use. It showed that for women currently taking oestrogen-only HRT, the risk of breast cancer incidence:

- was higher in those who had been taking HRT for at least 1 year **and**
- increased with duration of use.

For women who had taken oestrogen-only HRT in the past, it showed the risk of breast cancer incidence:

- was not quite as high as in those currently taking it
- was greater the longer they had taken HRT
- remained higher than for women who had never taken HRT for up to at least 10 years after stopping use.

Interpretation of the evidence on breast cancer incidence with oestrogen-only HRT

The committee decided that the difference between RCT results and evidence from observational studies meant that it was not possible to be certain of the conclusions. They also agreed this should be highlighted in the wording of the recommendation, by explaining that there was little or no increase in the risk of breast cancer incidence.

The committee also looked at evidence that compared different types of oestrogens and different modes of administration. The evidence did not show any differences in risk of incidence of breast cancer for different types of oestrogen. There was some uncertainty in relation to mode of administration. The committee therefore made a recommendation for research on mode of administration for systemic HRT.

Mortality from breast cancer

Evidence from an RCT showed that there was a reduction in the risk of mortality from breast cancer in those using oestrogen-only HRT compared with placebo. The observational data was not in line with the RCT data, as it showed there was an increased risk of mortality from breast cancer in oestrogen-only HRT users. The committee agreed that, although the RCT evidence showed a reduced risk, there was also evidence showing an increased risk. Therefore, it was important to highlight in the recommendations that there is a possibility of a small increase in the risk of breast cancer mortality.

Return to recommendation

Cancer: endometrial

The committee discussed the evidence from RCTs and observational studies. The evidence from RCTs was unclear because there were only 2 studies with no, or few, cases of endometrial cancer.

The committee also discussed the evidence from observational studies on oestrogen-only HRT versus no HRT in women with a uterus. It showed that the risk of endometrial cancer is increased in those:

- currently taking oestrogen-only HRT **and**
- who have been taking HRT for over 10 years (and are still taking it) or have taken oestrogen-only HRT in the past for over 10 years.

This increase in risk was present regardless of whether the treatment was oral or transdermal.

The committee discussed the well-established association between oestrogen-only HRT and the risk of endometrial cancer. They agreed it was important to explain to people with a uterus that this is why they would be offered combined HRT as per recommendation 1.8.1 in the section on starting HRT.

Return to recommendation

Cancer: ovarian

The committee discussed the evidence from observational studies. No evidence from RCTs was identified. Overall, with oestrogen-only HRT, the evidence showed that the risk of ovarian cancer:

- was higher in those who had been taking HRT for at least 5 years
- increased with duration of HRT use.

However, the committee agreed that risk remained small in absolute terms, because the baseline risk of ovarian cancer is low. The risk increased by 1 in 1,000 women for oestrogen-only HRT, when currently taking it, having started at the age of 50. The committee agreed that all of this should be explained when HRT is being considered.

Return to recommendation

Coronary heart disease

The committee based their recommendations on RCTs and observational studies.

The majority of the RCT and observational evidence both showed the risk of coronary heart disease did not increase when taking HRT. The committee agreed this information should be shared with people to allow them to make an informed decision.

The committee also discussed the evidence on the possible impact of 2 factors:

- the length of time between menopause and the first use of HRT

- the person's age at first HRT use.

They looked at coronary heart disease risk for different subgroups, and at the statistical significance of any differences observed between these subgroups. As a result, they agreed they could not make any recommendations about the impact of either of these factors on coronary heart disease risk in people taking HRT. This is because there were:

- no statistically significant subgroup differences in the RCT evidence
- inconsistent results between different observational studies **and**
- inconsistency between the conclusions of the RCT evidence and observational studies.

RCT evidence

When looking at women of all ages at first HRT use together as 1 group, the evidence showed no difference in risk of coronary heart disease between women who had been taking oestrogen-only HRT for 5 to 9 years and were still taking it, and women who were not taking HRT and had never taken it.

Subgroup analysis that looked at whether coronary heart disease risk was affected differently (if at all) for people of different ages at first HRT use, showed:

- an isolated reduced risk in 1 subgroup (when people were 50 to 59 at first HRT use) **but**
- no difference in risk for any of the other subgroups.

In addition, statistical testing showed that the difference between people aged 50 to 59 at first HRT use and other subgroups was not significant and so should not be included in information shared with people considering HRT.

Observational study evidence

The committee looked at observational evidence on whether the length of time between a person's menopause and the moment they start HRT affects their risk of coronary heart disease. For women currently taking oestrogen-only HRT, who had been taking it for an unknown duration, the 2 observational studies reported different conclusions on this:

- One study showed a reduced risk of coronary heart disease when HRT was started within 4 years of menopause, while the other study showed no difference in risk when HRT was started between the ages of 45 to 54 (which is likely to be within 4 years of menopause).
- One study showed no difference when HRT was started more than 10 years after menopause, while the other study showed a reduction in risk when HRT was started between the ages of 65 and 74 (which is likely to be 10 years or more after menopause).

The committee recognised that some observational studies may have been influenced by residual confounding factors such as socioeconomic status, smoking, medical history or other factors which may be related to HRT use and cardiovascular risk.

Differences in direction of effect across study types

When looking at the effect of age at first use of HRT on the risk of coronary heart disease, there was also some variation in results across different study types, for example:

- the RCT evidence showed no difference in risk when HRT was started between the ages of 60 and 69
- an observational study showed a reduction in risk when HRT was started between the ages of 65 and 74.

The age groups overlap between the RCT and observational study, but the results for these overlapping age groups are contradictory, making it difficult to reach a conclusion with regards to age trends.

Mortality related to coronary heart disease

The RCT and observational study evidence both showed that, for women with no history of coronary heart disease, there was no increase in mortality from cardiovascular disease from taking HRT. The committee agreed that it was important for people to know this so they could make an informed choice.

Return to recommendation

Stroke

The committee based their recommendations on RCTs and observational studies.

The RCTs showed that, overall, there is an increased risk of stroke in women currently taking oral oestrogen-only HRT. These findings were supported by observational evidence. National statistics also show that the baseline risk for stroke in women aged under 60 is very low. The committee agreed that this should be explained to anyone thinking about HRT because the risk may remain small despite any change in risk reported in the RCT and observational study findings.

Observational evidence showed that transdermal oestradiol did not increase the risk of stroke whereas oral oestradiol did. The committee noted that this was consistent with the pattern in combined HRT. They agreed that this should be explained so that people can factor this into their decision making.

The observational evidence showed an increased risk of stroke when oestrogen-only HRT was given at a high dose while, at low and medium doses, there was no increase in risk for oestrogen-only HRT compared with no HRT. Risk was also increased in women currently taking oestrogen-only HRT who had been taking it for 5 to 9 years when they had been aged 60 years or over at first HRT use. The committee decided that both these points should be covered when making shared decisions on treatment.

Return to recommendation

Impact of timing of HRT for menopause symptoms on risk of coronary heart disease

There was not a lot of data to check whether the following factors impact on risk of coronary heart disease:

- the age of the person when they start HRT **and**
- the time between a person's menopause and when they start HRT.

This resulted in what is called 'lack of statistical power'. In other words, the small amount of data means that statistical test could show a difference where there is none.

In what little data was available, the risk did not have a clear tendency to decrease or

increase with either of the above 2 factors (that is, with the age of the person when they start HRT or the time between a person's menopause and when they start HRT).

As a result, the committee decided to make a recommendation for research on the impact of timing of HRT on risk of coronary heart disease.

Impact of mode of administration of oestrogen-only HRT on coronary heart disease

There was no evidence on whether 1 mode of administration of oestrogen-only HRT differed to another in its impact on risk of coronary heart disease. The committee therefore prioritised a recommendation for research on the mode of administration for systemic HRT.

Risk of cardiovascular disease with HRT in people from ethnic minority backgrounds

The committee noted that there was little evidence for people from ethnic minority backgrounds for cardiovascular health and stroke (as well as all other health outcomes), so they made a recommendation for research on the impact of HRT on health outcomes for these groups of people.

Other considerations relating to cardiovascular disease

The committee were aware of systematic reviews by Boardman et al. (2015), Kim et al. (2020) and Salpeter et al. (2006) – see the list of excluded studies in evidence review C: cardiovascular disease and stroke. These 3 systematic reviews did not meet the inclusion criteria of NICE's 2024 evidence review because:

- they combined data for participants who received combined HRT and oestrogen-only HRT (Boardman et al. 2015) **or**
- some individual studies included within a review did not match NICE's 2024 criteria and therefore the entire systematic review could not be included (Kim et al. 2020 and Salpeter et al. 2006).

The studies included in these systematic reviews were checked and any relevant ones were then included in NICE's 2024 evidence review if they matched its criteria.

However, the committee did comment on whether the conclusions made in NICE's 2024 evidence review aligned with the findings of these 3 systematic reviews. Although there were differences observed in certain areas, none of them challenged the overall conclusion that HRT does not increase coronary heart disease risk.

Dementia

The committee noted that there was relatively little evidence on dementia compared with other health outcomes, with only 7 studies identified. They acknowledged that most of the evidence was from observational studies and so they very carefully looked at how various confounders had been adjusted for.

The committee agreed that some of the evidence did not make the necessary adjustments for confounding factors, such as socioeconomic status, or did not reliably ascertain incidence of dementia.

To guide their discussions and support the recommendations, the committee agreed to focus on 2 observational studies, 1 from the UK and 1 from Denmark (which both made the most appropriate adjustments for confounders). They also focused on the Women's Health Initiative Memory Study (WHIMS) of women starting HRT over the age of 65, which is based on data from a randomised controlled trial (RCT) from the Women's Health Initiative (WHI).

The observational evidence showed no significant differences in dementia risk when comparing oestrogen-only HRT with no HRT use. The evidence from the WHIMS study also showed no significant differences in incidence of dementia, between those who are taking or have taken oestrogen-only HRT and those taking placebo.

The committee discussed some of the limitations in the WHIMS study, such as the low incidence of dementia in the placebo arm, which was lower than the incidence of dementia in the UK. They also noted that the population was different from a typical group of people taking HRT, in that they first started taking HRT at the age of 65 or over.

Recommendations for research

The committee recognised that there are still uncertainties around the current evidence base and that further research is needed. They noted that the previous version of the guideline included a recommendation for research related to dementia and decided to

keep this.

The evidence was unclear about the impact of mode of administration on risk of dementia. The committee therefore prioritised a recommendation for research on mode of administration for systemic HRT.

Return to recommendation

How the recommendation might affect practice

It is current practice to discuss benefits and risks with people when considering treatment options. The recommendation will standardise the information that will be shared. While the 2024 version of this guideline includes some new or updated information to share, it is unclear how this will change the treatment choices made and how this will impact on practice.

It is possible that the recommendation may increase the use of transdermal HRT since it was not associated with an increased risk of stroke (and, according to 2015 recommendations that were not reviewed in 2024, it is also associated with a lower risk of venous thromboembolism than oral preparations).

Return to recommendation

Cardiovascular disease prevention

Recommendation 1.6.4

Why the committee made the recommendation

Given the findings about the effect of HRT on coronary heart disease and stroke (as covered in the rationales on the effect of combined and of oestrogen-only HRT) the committee agreed that the evidence did not support the use of combined or oestrogen-only HRT for primary or secondary prevention of cardiovascular disease.

How the recommendation might affect practice

It is unclear whether it is current practice to use HRT for the specific purpose of primary or

secondary coronary heart disease prevention. So, the recommendation is likely to standardise practice.

Return to recommendation

Dementia prevention

Recommendation 1.6.5

Why the committee made the recommendation

The committee noted the scope of this guideline and agreed that the indication for HRT prescriptions in the UK was menopause symptoms. Therefore, the aim of the included studies was not dementia prevention. They agreed it was important to highlight that the evidence did not support this indication.

How the recommendation might affect practice

It is unclear whether it is current practice to use HRT for the specific purpose of dementia prevention. So, the recommendation is likely to standardise practice.

Return to recommendation

Effects of HRT use in early menopause on specific health outcomes

Recommendation 1.6.6

Why the committee made the recommendation

No evidence was identified on the benefits and risks of either taking or not taking HRT relating to osteoporosis, risk of fractures or cardiovascular outcomes, or endometrial or ovarian cancer in people experiencing early menopause (people aged 40 to 44). Some evidence was identified on the effect of taking or not taking HRT on breast cancer risk in this age group.

The committee did not look at evidence on whether early menopause itself may have an impact on health outcomes, and how to manage any impact it might have. Therefore, they could not make any recommendations on the benefits and risks of HRT to manage any differences in risk that may result from early menopause.

The committee agreed it was important to take a person's age at the onset of menopause-associated symptoms into account during discussions about HRT (in line with the section on discussing management options). They agreed that the age cut-offs defining premature ovarian insufficiency (POI), early menopause and typical menopause were a little arbitrary. They also agreed it is clinically plausible that the benefits and risks evolve gradually from what they are for people with premature ovarian insufficiency to what they are for people aged 45 or over. As a result, it is likely that, for people with early menopause, the benefits and risks of either taking or not taking HRT lie somewhere between those for people with premature ovarian insufficiency and those for people aged 45 or over, for whom there is more evidence about these benefits and risks.

The committee discussed the similarities between early menopause and POI. Although there is little evidence of the impact of HRT on health outcomes in people with POI, it is current practice for this group to take HRT routinely. HRT is offered to them to lower the risk of some health outcomes, for example, osteoporosis. The situation may be similar for early menopause, for which routine HRT is also current practice.

Evidence showed that, as for people aged 45 or over, the risk of breast cancer in early menopause is increased when taking HRT compared with not taking HRT. However, the committee agreed that taking HRT in early menopause may affect the risk of different health outcome in different ways (that is, it may decrease some risks and increase others), as it does for people with POI and for people experiencing menopause at 45 or over.

As a result, the lack of evidence on outcomes other than breast cancer meant that it was not possible to make recommendations about the overall balance of benefits and risks of taking or not taking HRT in early menopause.

The committee agreed that it was important to highlight this lack of evidence and made a key recommendation for research on the impact of HRT in early menopause on specific health outcomes to address it.

How the recommendation might affect practice

While the recommendation may help people make decisions about treatment, it is unclear how it will change these decisions and how that will impact overall resource use. It would however be unethical to prevent such information being discussed with people experiencing early menopause even if it did lead to an increase in resource use.

Return to recommendation

Starting and stopping HRT for anyone

Recommendations 1.8.1 to 1.8.3 and 1.8.7

Why the committee made the recommendations

Starting HRT

When a person decides they want to take HRT for menopause-associated symptoms, the committee recommended, that, if the person has a uterus, they should be offered combined oestrogen and progestogen. Whereas, if the person has had a total hysterectomy, they should be offered oestrogen alone.

The main reason for this is the established knowledge that oestrogen alone, if given to people with an intact uterus, can stimulate the growth of the uterine lining (endometrium). In turn, this oestrogen stimulation can lead to an increased risk of endometrial hyperplasia (overgrowth of the endometrium) and potentially, endometrial cancer.

This is consistent with the evidence showing that oestrogen-only HRT increases the incidence of endometrial cancer in people with a uterus (see the section related to the effect of oestrogen-only HRT on endometrial cancer for people aged 45 and over). However, because it is now considered unsafe to give oestrogen-only HRT to people with a uterus, no further research is being carried out, and the recommendation is based on established knowledge more than on the evidence identified for this guideline. Adding progestogen to the HRT regimen helps protect the endometrium by counteracting the stimulating effects of oestrogen, and so reduces the risk of endometrial hyperplasia and cancer.

Progestogen is given to protect the uterine lining, so it is not needed for people who have had a total hysterectomy. The committee discussed that this may be different for people with a subtotal hysterectomy. They decided that they could not be prescriptive about the type of HRT to be used for people who have had a subtotal hysterectomy because their condition is clinically complex, and they had not reviewed evidence about the effect of HRT on risk of endometrial cancer for this group. They acknowledged that people who were going to have, or had had, a subtotal hysterectomy would likely be under the care of a specialist (or a relevant member of the associated multidisciplinary team) who could discuss HRT options tailored to their needs.

Some people have a hysterectomy for a condition that may be affected by HRT, such as endometriosis. The committee did not review evidence related to such conditions. However, they recognised that the decision about the type of HRT that best balances benefits and risks for a person who has had a hysterectomy may be affected by the condition that led to the hysterectomy. For this reason, advice from a healthcare professional with specialist knowledge of that condition may be needed.

The committee noted that it is common practice to prescribe the smallest effective dosage of a treatment to help balance its benefits and risks, so they recommended this for HRT too. Effectiveness of HRT can vary between people, so starting with the lowest effective dosage helps find the right balance between effectively treating symptoms and managing risks from the treatment, taking into account each person's specific needs.

Stopping HRT

A personal history of cancer is a contraindication to systemic HRT because it has been shown that systemic HRT can lead to cancer progression or recurrence. Therefore, the committee agreed that systemic HRT should be stopped in people who are diagnosed with breast cancer because this would be off-label use and therefore there would be safety concerns. However, they agreed that this is already covered in NICE's guideline on early and locally advanced breast cancer.

How the recommendations might affect practice

The recommendations reflect current practice in choice of HRT prescribing for people with a uterus or for people who have had a total hysterectomy.

It is common practice to seek advice from a healthcare professional with expertise in a

condition when the clinical situation is complex, such as identifying the most suitable type of HRT for someone whose condition may be affected by it. This would usually be an informal process, so it is unlikely to have a significant impact on practice.

Stopping HRT if a person is diagnosed with breast cancer is also current practice.

Return to recommendations

Implementation

Through engagement with stakeholders and with the help of the guideline committee, NICE has identified areas of its guideline on menopause that (at the time of the 2024 update) may be a significant change to practice or challenging to implement. These are:

- access to healthcare professionals with expertise in menopause
- communicating the benefits and risks of hormone replacement therapy (HRT)
- access to menopause specific cognitive behavioural therapy (CBT)
- equity of services.

For further information and support, see tools and resources.

Context

Since the previous version of this guideline was published, new evidence that could affect recommendations was identified through NICE's surveillance process. Full details are set out in the surveillance review decisions from 2019 and 2021.

Menopause is the point at which menstrual cycles stop. Menopause usually happens in women, and in some non-binary and trans people, when they are aged 45 to 55, but can happen earlier, for example, because of surgery or medical treatment. The time period when symptoms first start and there are changes to the menstrual cycle is called perimenopause. Its duration varies, but it typically lasts a few years, and leads to menopause. Based on evidence, 3% to 8% of people experiencing menopause are estimated to have early menopause (perimenopause starting between 40 and 44 years), and 1% are estimated to have premature ovarian insufficiency (perimenopause starting before 40 years).

Menopause can affect people in a variety of ways. Most experience some symptoms, although not everyone seeks treatment. Some people have symptoms that may significantly impact their daily life, and they need treatment, for example, hormone replacement therapy (sometimes called HRT or menopause hormone therapy). Menopause symptoms may last for a long time, with a median duration of 7 years. Common symptoms associated with menopause are vasomotor symptoms (hot flushes and night sweats) and vaginal dryness.

In 2019, the Medicines and Healthcare products Regulatory Agency (MHRA) published a drug safety update on hormone replacement therapy based on the Collaborative Group on Hormonal Factors in Breast Cancer's 2019 meta-analysis of type and timing of menopausal hormone therapy and breast cancer risk, and this guideline takes this update into account.

Finding more information and committee details

To find NICE guidance on related topics, including guidance in development, see the NICE topic page on menopause.

For full details of the evidence and the guideline committee's discussions, see the evidence reviews. You can also find information about how the guideline was developed, including details of the committee.

NICE has produced tools and resources to help you put this guideline into practice. For general help and advice on putting our guidelines into practice, see resources to help you put NICE guidance into practice.

Update information

We have reviewed the evidence and made new or updated recommendations on:

- cognitive behavioural therapy to manage symptoms associated with the menopause
- managing genitourinary symptoms associated with the menopause
- the effects of hormone replacement therapy (HRT) on specific health outcomes.

These recommendations are marked **[2024]**.

We have also made some changes without an evidence review. These changes include clarifying:

- the information about menopause and fertility that should be shared and discussed with people who have associated symptoms or are approaching menopause, including those who are likely to experience menopause as a result of medical or surgical treatment
- when to refer people to a healthcare professional with expertise in menopause, or fertility, or both
- how to address the possible effects of menopause on mental health.

These are marked **[2015, amended 2024]**.

We have also made some presentational changes without changing the meaning of the recommendations.

- Changes have been made to the wording to bring the language and style up to date.
- Information on the risk of the effects of hormone replacement therapy (HRT) on some health outcomes (muscle mass and strength, osteoporosis, type 2 diabetes and venous thromboembolism) has been clarified.

These recommendations are marked **[2015]**.

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