Perimenopausal contraception: A practice-based approach

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Background

Women who are perimenopausal are at risk of unintended pregnancy despite relatively low fertility at this stage. Contraceptive choice can be limited by increased comorbidities, but the UK Medical Eligibility Criteria (UKMEC) system provides a framework for safe prescribing.

Objectives

This article provides evidence-based guidance on contraceptive options, and information to support decision-making about stopping contraception at menopause.

Discussion

Contraceptive choice is determined by several factors, including medical eligibility, side effects and risks, non-contraceptive benefits, cost and personal preference. Long-acting reversible contraceptives (LARCs) are an effective, acceptable and safe choice for many women. For women aged ≥50 years who are using a non-hormonal method, contraception is recommended until after 12 months of amenorrhoea, or 24 months if they are aged <50 years. Switching from a combined hormonal contraceptive or depot injection to an alternative progestogen-only or non-hormonal method is advised in women aged >50 years; serial follicle-stimulating hormone (FSH) levels can guide method cessation given amenorrhoea is not a reliable indicator of menopause in this context.

The median age of menopause for Australian women is 51 years,[1] and the available data suggest that less than 1 per 100 women conceive when they are aged >50 years.[2] For pregnancies in women aged >40 years, approximately one in four end in abortion,[3] and continuing pregnancies are associated with higher risks of fetal abnormality, miscarriage and premature delivery than in women who are younger.[4] Some women may underestimate their fertility or mistakenly believe that menopausal hormone therapy is contraceptive. Contraception is therefore an important consideration during a perimenopause-related consultation.

Supporting contraceptive choice at the perimenopause

Contraceptive choice is determined by several factors, including medical eligibility, accessibility, affordability, side effects or desire for non-contraceptive benefits. Perimenopause is a particularly important time to review the safety and appropriateness of a woman's contraception, either opportunistically or at the time of a repeat prescription. The UK Medical Eligibility Criteria (UKMEC) system from the UK Faculty of Sexual and Reproductive Healthcare is a useful framework for considering contraindications to contraceptives. It provides an evidence-based approach to safe prescribing, with each potential contraindication ranked from 1 (no restriction) to 4 (absolute contraindication; Tables 1 and 2).[5]

While all methods of contraception are potentially suitable and none is contraindicated by age alone, the use of combined oral contraception, the vaginal ring and depot medroxyprogesterone acetate (DMPA) are not generally recommended in those aged >50 years.[6] Additionally, women aged ≥40 years have an increased risk of comorbidities, which may limit contraceptive options. Perimenopause is also a time of hormonal fluctuation, and symptoms such as heavy menstrual bleeding, mood swings, breast tenderness, hot flushes and night sweats, can influence contraceptive choice.

Contraceptive options at the perimenopause

Levonorgestrel intrauterine device

A levonorgestrel intrauterine device (LNG-IUD), which is listed on the Pharmaceutical Benefits Scheme (PBS), can be used by most women to provide five years of highly effective contraception. There is a significant reduction in menstrual bleeding, no medication interactions and few contraindications.[7] Notable contraindications are current or past breast cancer (MEC 4 or 3 respectively),[5] although some oncologists may make a considered decision to use the LNG-IUD to prevent endometrial polyps and hyperplasia in women using tamoxifen.[8]

Women presenting with abnormal bleeding, including postcoital, intermenstrual or heavy menstrual bleeding, must always be investigated prior to insertion because of the risk of endometrial cancer and other pathology with increasing age, especially in the presence of additional risk factors such as obesity. Investigations include, at least, a high-quality transvaginal ultrasound and full blood count, but may also require referral for hysteroscopy.

LNG-IUDs can be associated with irregular bleeding, particularly in the first few months, after which most women experience light bleeding or amenorrhoea. Despite the low systemic LNG dose, some women experience transient hormonal side effects such as acne.

If the device is inserted in women aged ≥45 years, it can be retained for up to seven years in those who continue to bleed and until menopause if amenorrhoeic (off-licence).[9] Amenorrhoea cannot be used as an indicator of menopause (Table 3).
The LNG-IUD is also licensed (but not PBS-listed) for a maximum of five years as part of menopausal hormone therapy to protect the endometrium in women choosing to use oestrogen for vasomotor symptoms.

Table 1. Definition of UK Medical Eligibility Criteria (UKMEC) categories for contraceptive use (April 2016)

MEC 1	A condition for which there is no restriction for the use of the contraceptive method
MEC 2	A condition where the advantages of using the method generally outweigh the theoretical or proven risks
MEC 3	A condition where the theoretical or proven risks usually outweigh the advantages of using the method. The provision of the method requires expert clinical judgment and/or referral to a specialist contraceptive provider, since use of the method is not usually recommended unless other more appropriate methods are not available or not acceptable
MEC 4	A condition which represents an unacceptable health risk if the contraceptive method is used

Copper intrauterine device

Copper intrauterine devices (Cu-IUDs), either the five-year or 10-year types, provide highly effective contraception without hormonal side effects or risks, and can be used by women in whom hormones are contraindicated.[5] Additionally, Cu-IUDs provide emergency contraception if inserted within five days of unprotected intercourse.[10] However, Cu-IUDs are not PBS-listed (costing approximately $100) and are associated with heavier menstrual bleeding. Any Cu-IUD approved for use in Australia inserted in women aged ≥40 years can be retained until menopause (off-label use).

Insertion of an IUD is associated with a small risk of complications, including perforation (approximately 2/1000), infection during the first 20 days (<1/300), failure (<1/100) and expulsion (5%).[9]

Contraceptive implant

The progestogen-only etonogestrel implant can be used until menopause and has few contraindications (breast cancer is a notable exception).[5] It is associated with no, or clinically insignificant, metabolic effects,[11] and no significant reduction in bone density.[12] It may, however, be associated with prolonged or frequent bleeding in approximately one in five women. The threshold for investigation of troublesome bleeding to exclude cervical or endometrial pathology in women aged >40 years is lower than for women who are younger. There is no current recommendation for the extended use of the etonogestrel implant beyond three years in perimenopausal women, and it is not licensed to protect the endometrium as part of menopausal hormone therapy. Amenorrhoea cannot be used as an indicator of menopause in users of the contraceptive implant (Table 3).

Depot medroxyprogesterone acetate

DMPA is not used as first-line management in women aged >45 years, and not generally recommended beyond 50 years of age because of its possible effect on bone density and lipids.[13] DMPA is associated with a small loss of bone density that is generally regained after cessation. A theoretical concern that women aged >45 years using DMPA could permanently compromise their bone health is not supported by available evidence.[14] Regular review for cardiovascular and bone density risks is advised for women in their 40s.

Combined hormonal contraception

Oestrogen-containing pills or the vaginal ring can be used by medically eligible women in their 40s (MEC 2), but are not generally recommended in women aged >50 years. The baseline risk of venous thromboembolism, myocardial infarction and stroke is significantly higher than for women who are younger. Additional MEC 2 risk factors for arterial vascular or venous disease, such as having a body mass index (BMI) 30–34 kg/m^2, dyslipidaemia or diabetes, generally preclude their use. Combined hormonal

Table 2. Selected UKMEC categories relevant for perimenopausal women

Eligibility criteria			CHC	ENG implant or POP	DMPA	Cu-IUD	LNG-IUD
Arterial vascular disease and risk factors							
Multiple risk factors for cardiovascular disease	For example older age, smoking, diabetes, hypertension and obesity		3	2	3	1	2
Smoking	Age ≥35 years	<15 cigarettes/day	3	1	1	1	1
		≥15 cigarettes/day	4	1	1	1	1
Obesity	BMI 30–34 kg/m^2		2	1	1	1	1
	BMI ≥35 kg/m^2		3	1	1	1	1
Hypertension	Adequately controlled		3	1	2	1	1
	Consistently elevated systolic 140–159 mmHg or diastolic 90–99 mmHg		3	1	1	1	1
	Consistently elevated systolic ≥160 mmHg or diastolic ≥100 mmHg		4	1	2	1	1
Current and history of IHD, stroke or TIA: To initiate			4	2	3	1	2
Current and history of IHD, stroke or TIA: To continue			4	3	3	1	3
Venous disease and risk factors							
VTE current (on anticoagulant) or history of			4	2	2	1	2
Family history VTE	First-degree relative aged <45 years		3	1	1	1	1
	First-degree relative aged ≥45 years		2	1	1	1	1
Major surgery	With prolonged immobilisation		4	2	2	1	2
Immobility, unrelated to surgery			3	1	1	1	1
Known thrombogenic mutation			4	2	2	1	2
Breast and reproductive tract conditions							
	Carriers of known gene mutations associated with breast cancer		3	2	2	1	2
	Current breast cancer		4	4	4	1	4
	Past breast cancer		3	3	3	1	3
Endocrine conditions							
Diabetes	Non-vascular disease, insulin or non-insulin-dependent		2	2	2	1	2
	Nephropathy/retinopathy/neuropathy or other vascular disease		3	2	2	1	2

BMI, body mass index; CHC, combined hormonal contraceptive; Cu-IUD, copper intrauterine device; DMPA, depot medroxyprogesterone acetate; ENG, etonogestrel; IHD, ischaemic heart disease; LNG-IUD, levonorgestrel intrauterine device; POP, progestogen-only pill; TIA, transient ischaemic attack; VTE, venous thromboembolism
To initiate indicates starting a method with an existing condition; to continue indicates ongoing use of a method when a condition develops after initiation

contraception is generally contraindicated in women who smoke, have hypertension or have a BMI ≥35 kg/m^2 (Table 2).

Combined pills with the lowest hormonal dose should be chosen. Those containing 20 µg ethinyl oestradiol and levonorgestrel 100 µg have a reduced risk of venous thromboembolism, myocardial infarction and stroke, compared with pills containing a higher ethinyl oestradiol dose.[15] However, this benefit needs to be balanced against a higher chance of breakthrough bleeding.

Pills containing oestradiol or oestradiol valerate in place of ethinyl oestradiol may also be an appropriate choice because of their reduced effect on laboratory-based coagulation, and inflammatory and metabolic disease markers.[16] However, evidence is pending for an effect on disease outcomes, and the higher cost, because they are not PBS-listed, may be a deterrent.

Women with appropriately investigated heavy menstrual bleeding may benefit from continuous use of a combined pill or ring by skipping the hormone-free break for three months or longer. The oestradiol valerate/dienogest pill is licensed for the management of idiopathic heavy menstrual bleeding in women requiring contraception, but evidence of superiority over other pill formulations is lacking. The oestradiol/nomegestrol combined pill may also be helpful in women with heavy menstrual bleeding, with 30% experiencing amenorrhoea.[17]

Combined hormonal contraceptives appear to have a positive effect on bone health[18] and may be helpful for perimenopausal symptoms, including hot flushes and night sweats. Women experiencing vasomotor symptoms during the hormone-free break can be advised to use the pill or ring continuously for three months or longer (review advised every 12 months).

Progestogen-only pill

The progestogen-only pill (POP) is more effective for women aged >40 years than for women who are younger.[19] Low-dose POPs that are available in Australia mainly work by thickening the cervical mucus and have a three-hour window to be taken every day.

The POP is believed to produce no or insignificant metabolic effects, but may cause poor cycle control, which may require investigation to exclude pathology in this age group.[20] Amenorrhoea cannot be used as an indicator of menopause in those who use POPs (Box 1). The POP is not licensed to protect the endometrium as part of menopausal hormone therapy.

Barrier methods

Male condoms are accessible, but their use might be limited if the male partner has erectile dysfunction. Female condoms are less widely available but do not require a fully erect penis. Both condoms prevent sexually transmissible infections (STIs). Additional water-based lubricant at the time of sex, or regular vaginal oestrogen cream, may be useful for vaginal dryness. Anecdotally, non-latex condoms may be associated with less vaginal irritation.The single-size silicone diaphragm can be an appropriate perimenopausal method; however, it does not protect against STIs.The general advice to combine barrier methods with another more effective contraceptive method may be less important at this age because of reduced fertility.

Withdrawal (coitus interruptus)

The withdrawal method is more likely to be effective in perimenopausal women because of declining fertility, but is not recommended as a contraceptive choice.

Fertility awareness methods

Fertility awareness methods (FAMs) require close monitoring of the menstrual cycle through calendar dates or fertility-related symptoms. FAMs are likely to be less effective in perimenopausal women because irregular cycles can make fertility calculations less reliable, notwithstanding decreased fertility.

Male and female permanent contraception

While rates of female sterilisation in Australia have been declining with increased uptake of LARCs,[21] vasectomy remains a useful choice, especially if the female partner has a condition such as breast cancer, where an effective method is required but contraindications to hormonal methods exist.

Table 3. Advice on stopping contraception for women aged 50 years and older according to method

Method	Advice
LNG-IUD, POP, ENG implant	Amenorrhoeic for ≥12 months: Check 2 x FSH levels at least six weeks apart and if both are ≥30 IU/L advise that contraception is only required for another 12 months; OR Continue until aged ≥55 years
Cu-IUD and barrier methods	Stop method after 12 months of amenorrhoea
DMPA	Generally not recommended beyond 50 years of age. Either: Switch to a non-hormonal method until amenorrhoea for 24 months;* OR Switch to an alternative progestogen-only method and follow method-specific advice for stopping
CHC: includes COCP and vaginal ring	Generally not recommended beyond 50 years of age. Either: Switch to a non-hormonal method until amenorrhoea for 12 months; OR Switch to LNG-IUD, POP or ENG implant and follow method-specific advice for stopping

**As prolonged amenorrhoea can occur after stopping DMPA, it is necessary to wait 24 months before a woman can be assumed to be no longer fertile. CHC, combined hormonal contraception; COCP, combined oral contraceptive pill; Cu-IUD, copper intrauterine device; DMPA, depot medroxyprogesterone acetate; ENG, etonogestrel; FSH, follicle stimulating hormone; LNG-IUD, levonorgestrel intrauterine device; POP, progestogen-only pill*

Emergency contraception

Oral emergency contraception includes a 1.5 mg levonorgestrel dose, licensed up to 72 hours after unprotected sex, but is effective up to 96 hours.[22] The newer ulipristal acetate appears to have superior efficacy,[23] and is licensed up to 120 hours after unprotected sex. Both types of emergency contraceptives are available without prescription. The Cu-IUD provides very effective emergency contraception and can be used as an ongoing long-term method.

Stopping contraception at menopause

Women aged ≥50 years who are using a non-hormonal method can be advised to stop their contraceptive method after 12 months of amenorrhoea, whereas those aged <50 years are advised to wait for 24 months (Box 1). Women using an oestrogen-containing method or DMPA are generally advised to stop or switch to a non-hormonal or progestogen-only method around their 50th year, whereas those using a POP, implant or LNG-IUD can continue to use these until menopause. In women who use progestogen-only methods, amenorrhoea is not a reliable indicator of menopause. The UK Faculty of Sexual and Reproductive Healthcare[6] recommends that women aged 50 years and older using a progestogen-only method who are amenorrhoeic for 12 months can have their follicle-stimulating hormone levels measured on two occasions, at least six weeks apart; if both are ≥30 IU/L then contraception is only required for another 12 months.

Ultimately, a woman's decision to stop contraception when fertility is low is a personal and individual decision. While menopause can be assumed in the majority of women at 55 years of age, caution is needed for women with a family history of late menopause or an absence of menopausal symptoms. The role of the general practitioner is to provide information to support an informed choice.

Implications for general practice

Perimenopausal women can potentially use all contraceptive methods, although an age-related increase in the risk of arterial vascular disease, venous thromboembolism and hormonally related cancers may limit choice.

Careful assessment for risk factors is necessary, particularly when prescribing oestrogen-containing methods, which are generally not recommended in women aged >50 years. DMPA is second-line in women aged >45 years, but all other progestogen-only methods can generally be used until menopause, unless the woman has a history of breast cancer or severe liver disease. LNG-IUD is useful for appropriately investigated heavy menstrual bleeding. Cu-IUD can be an excellent choice for women without heavy menses as it has few contraindications and can be retained until menopause if inserted in women aged ≥40 years.

The UKMEC system provides an evidence-based framework for the safe provision of contraception (www.fsrh.org/standards-and-guidance/uk-medical-eligibility-criteria-for-contraceptive-use).

FSH levels can be used to determine contraceptive need in amenorrhoeic women aged ≥50 years using progestogen-only contraception. Alternatively, women can continue until around 55 years of age, when menopause is highly likely to have occurred. Understanding method-specific advantages and disadvantages will help GPs support patients in choosing the most appropriate contraceptive for their individual circumstances. Acquiring skills to insert and remove implants and IUDs will improve access to the highly effective LARCs.

Key points

- Menopausal hormone therapy is not contraceptive.
- Amenorrhoea in women using hormonal contraception is not an indicator of menopause.
- FSH levels can be used to determine menopause in amenorrhoeic women aged >50 years using progestogen-only methods including the LNG-IUD.
- The background risk of arterial vascular disease and venous thromboembolism increases with age. Careful consideration is required when prescribing combined hormonal methods or DMPA.
- Cu-IUDs have extended use in women aged ≥40 years at the time of insertion.
- LNG-IUDs have extended use in women aged ≥45 years at the time of insertion.
- The contraceptive implant and IUDs have few absolute or relatively strong contraindications in perimenopausal women.

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