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Contraceptive choices for women with cardiovascular risk factors

GPs need to balance the risks against the benefits when advising women on contraceptive options, especially in women with risk factors for cardiovascular disease (CVD)

Cardiovascular disease is relatively uncommon in women of reproductive age, but some 5.5% of 25-34 and 11.8% of 45-54 year-old women have CVD,¹ and CVD is the third most common cause of death in women aged 45-54 years.²

Major risk factors for CVD, such as smoking and obesity, are common in women of reproductive age – 20-30% of women aged 16-54 smoke¹ and 30-62% are overweight or obese.¹

Contraceptive options

Factors that influence a women's choice of contraceptive method include user acceptability, efficacy, non-contraceptive benefits and side-effects but the risks of each method must be balanced against benefits on an individual basis.

The UK Medical Eligibility Criteria (UKMEC) provides an evidence-based resource for guiding clinical decision making.³ It classifies the risk of contraceptive methods in the context of different medical conditions or risk factors. The criteria for CVD/CVD risk factors are shown overleaf.

More detailed information about the health risks and benefits of individual methods is available from the Faculty of Sexual and Reproductive Health Clinical Effectiveness Unit.⁴

Clinicians should ensure that they have an up to date clinical history (including: medical conditions, medication use, family history and CVD risk factors) and have documented a blood pressure measurement and BMI assessment. This will allow clinicians to fully assess eligibility for contraceptive use.

Combined hormonal contraception

Oestrogen-containing contraception has been associated with an increased risk of CVD^{5,7} which appears to be compounded by risk factors such as increased age, smoking, hypertension and migraine with aura.^{5,8} Particular care must be taken when initiating or continuing combined methods in women with these CVD risk factors.

Progestogen-only pills (POPs)

There is little evidence to suggest that progestogen-only methods are associated with an increased risk of stroke⁹ or MI.¹⁰ However, there is theoretically a small increased risk in women with CVD/CVD risk factors¹¹ because of the adverse effect that progestogens have on lipid metabolism.⁵ Even in women with multiple risk factors for CVD, the advantages of progestogen-only pills (POPs) generally outweigh the risks.³ There is no evidence of a causal association between POPs use and weight change or headache. In addition POPs may be appropriate in women of any age with a history of migraine (with or without aura).¹¹

Long-acting reversible contraception (LARC)

NICE advises that all women requesting contraception are informed of the benefits of LARC in view of their lower failure rates.¹² Eligibility criteria are summarised overleaf.

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UK medical eligibility criteria for contraceptive use

Cardiovascular disease and common cardiovascular risk factors, and hormonal/intrauterine contraception³

	CHC	POP	DMPA/NET-EN	IMP	Cu-IUD	LNG-IUD
Concurrent or history of cardiovascular disease						
Adequately controlled hypertension (with no other risk factors)	3	1	2	1	1	1
CHD	4	2 (initiation) 3 (continuation)	3	2 (initiation) 3 (continuation)	1	2 (initiation) 3 (continuation)
Stroke/TIA	4	2 (initiation) 3 (continuation)	3	2 (initiation) 3 (continuation)	1	2 (initiation) 3 (continuation)
Hyperlipidaemia (depending on type, severity and other CVD risk factors)	2/3	2	2	2	1	2
Cardiovascular risk factors						
Age (years)						
≥40 years	2*	1		1	1	1
18-45 years			1			
>45 years			2*			
Smoking						
Age <35	2	1	1	1	1	1
Age ≥35 + <15 cigarettes/day	3	1	1	1	1	1
Age ≥35 + ≥15 cigarettes/day	4	1	1	1	1	1
Age ≥35 + stopped <1 year ago	3	1	1	1	1	1
Age ≥35 + stopped ≥1 year ago	2	1	1	1	1	1
Obesity (assessed using BMI)						
≥30-34 Kg/m ²	2	1	1	1	1	1
≥35 Kg/m ²	3	1	1	1	1	1
Multiple risk factors for cardiovascular disease (e.g. older age, hypertension, smoking, obesity)	3/4**	2	3	2	1	2
Migraine with aura, at any age	4	2	2	2	1	2
Last episode ≥5 years ago	3	2	2	2	1	2
Diabetes						
History of gestational diabetes	1	1	1	1	1	1
Non-vascular disease (insulin or non-insulin dependent)	2	2	2	2	1	2
Nephropathy/retinopathy/neuropathy/other vascular disease	3/4	2	3	2	1	2
History of gestational hypertension (where current BP is normal)	2	1	1	1	1	1

* FSRH CEU guideline recommends switching to other methods at the age of 50 years.
** Peripheral arterial disease appears in the UKMEC under hypertension: vascular disease, with the same eligibility category as current or previous history of CHD or Stroke/TIA

CHC=combined hormonal contraception
POP=progestogen-only pill
DMPA=depot medroxyprogesterone acetate
IMP=implant (progestogen-only)
NET-EN=norethisterone enantate

Cu-IUD=copper-bearing intrauterine device
LNG-IUD=levonorgestrel-releasing intrauterine system
UKMEC-UK medical eligibility criteria

Definition of UKMEC categories:

UKMEC 1: A condition for which there is no restriction on the use of the contraceptive method
UKMEC 2: A condition where the advantages of using the method generally outweigh the theoretical or proven risks

UKMEC 3: a condition where the theoretical or proven risks generally outweigh the advantages of using the method. The provision of a 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 acceptable
UKMEC 4: A condition that represents an unacceptable risk if the contraceptive method is used

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