PERIMENOPAUSAL CONTRACEPTION

The term ‘perimenopause’, which literally means ‘around the menopause’, refers to the menopause transition years, a span of time both before and after the date of the final episode of menstruation. According to the North American Menopause Society, this transition can last for 4-8 years. The Centre for Menstrual Cycle and Ovulation Research describes it as a 6-10-year phase ending 12 months after the last menstrual period (Wikipedia). Perimenopause is also called the menopausal transition.

Almost half of pregnancies are unplanned. As a woman ages, so does her fertility potential (fecundity). Fertility will gradually decline and oocyte quality will deteriorate. However, fertility potential is still present in women in the latter reproductive years. In the UK the conception rate for women 40 years and over was 13.0 per 1000 in 2001. The abortion rate in this group of women was 28% in 2011.1 Many pregnancies in women over age 40 are unplanned. Data from 2006 in the USA put this figure at 48%.2

Spontaneous pregnancy after age 50 is rare. However, pregnancy after 40 is fraught with potential problems. Approximately one-third of pregnancies in this age group are likely to be medically or surgically terminated compared to one-fifth in younger women. Spontaneous abortion and genetic abnormalities also occur.3

Ongoing pregnancies have an increase in perinatal morbidity and mortality. Counselling of patients in this perimenopausal age group should include the offer of contraception. There is inadequate health education about the problems of pregnancy and the need for contraception in perimenopausal women.

In lean, non-smoking, healthy perimenopausal women, combined oral contraceptives (COCs) offer users not only effective contraception, but also benefits that include a reduction in heavy menstrual bleeding; regularisation of the menstrual cycle; protection against ovarian, endometrial and colorectal cancer; prevention of bone loss (with possible prevention of postmenopausal osteoporotic fractures); and some degree of relief from vasomotor symptoms.

Although an increased risk of venous thromboembolism (VTE) is well documented in oral contraceptive (OC) users, concerns also exist that use of the pill might increase the risk of myocardial infarction (MI), stroke and breast cancer in older women of reproductive age. So how should we counsel patients?

Contraceptive choice for women aged over 40 years may be influenced by many factors, including: frequency of intercourse, natural decline in fertility, sexual problems, the wish for non-contraceptive benefits, menstrual dysfunction and concurrent medical conditions.

The United Kingdom’s Faculty of Sexual and Reproductive Healthcare’s guidance on contraception for women over the age of 40 years, issued in 2010, forms the basis of this clinical interpretation of important practical issues in providing quality care for women in this age group.4

Fertility

As age increases, fertility declines for women and, to a much lesser degree, for men. This natural decline is related to many factors but the quality and quantity of oocytes is important. Although there is a decline in fertility from the mid-30s onwards, sexually active women require contraception if they do not wish to become pregnant. Women should be informed that despite this natural decline in fertility after their mid-30s, effective contraception is still required to prevent an unintended pregnancy.3

Pregnancy during the perimenopause

There is an increasing trend within the UK for women to have children later in life. The live birth rate for all age groups
in England and Wales has increased since 2007, with the greatest increase seen in women aged 40 years and over (the live birth rate was 12.0/1000 women in 2007 and 12.6/1000 in 2008), with the number of live births to mothers aged 40 and over nearly doubling from 13,555 in 1998 to 26,419 in 2008. Women in their 40s also experience unintended pregnancies and some opt for an abortion. In Scotland in 2008, the rate of abortion in women aged over 40 was 2.2 per 1000; in England and Wales among those aged 40-44 years it was 4 per 1000 (n = 7663), which was almost equivalent to the rates for young women under the age of 16 (n = 4113).4

Later childbirth is associated with worsening reproductive outcomes. There is more infertility and medical co-morbidity, and an increase in maternal and fetal morbidity and mortality. The maternal mortality rate in the UK is highest in the 40 years and over age group, with a rate of 29.4 per 100,000 maternities in 2003-2005, compared with a rate of 14.0 per 100,000 for all ages. In addition, the risk of pregnancy affected by trisomy 21 (Down syndrome) rises from 1 in 1600 in mothers aged <23 years to 1 in 40 for mothers aged 43 years. A prospective multicentre study of singleton pregnancies found that maternal age was associated with an increased risk of miscarriage, gestational diabetes, placenta praevia and Caesarean section. In the same study, maternal age greater than 40 years was associated with placental abruption, preterm delivery, low birth weight and increased perinatal mortality. The evidence for increased risk of non-chromosomal congenital abnormality in the older maternal age group is mixed. However, a recent review of data from the EUROCAT congenital anomaly register is reassuring. Increasing age alone does not appear to be a risk factor for non-chromosomal abnormality but reproductive, social, ethnic, environmental and lifestyle factors together with maternal age may have an effect. 4

Women should be informed that the risks of chromosomal abnormalities, miscarriage and pregnancy complications, and of maternal morbidity and mortality, increase for women aged over 40 years.

Transition to menopause

The menopause is a retrospective diagnosis confirmed after 12 months of amenorrhoea. For most women, the 40s and 50s are a time when they move from normal ovulatory menstrual cycles to the cessation of ovulation and menstruation. During this time, intermittent ovulation and anovulation occur; there may be a rise in follicle-stimulating hormone (FSH) levels and women will experience shortening and/or lengthening of their menstrual cycle.

Contraception – medical eligibility criteria

There is a wide range of contraceptive methods available, none of which is contraindicated based on age alone, something of which women over 40 need to be advised. However, as women grow older, age may become a more significant risk factor for developing incidental medical conditions that could impact on contraceptive choice. A clinical history (medical, sexual, reproductive and social) will enable practitioners to assess the risk of STIs, sexual function and medical and social factors that may influence contraceptive use such as frequency of intercourse, change of partner, plans to have children, menstrual dysfunction and lifestyle factors such as smoking. The WHO Medical Eligibility Criteria (MEC) for Contraceptive Use and the UK MEC provide evidence-based recommendations on the use of contraceptive methods in the presence of different medical and social factors, thus ensuring women can select the most appropriate method of contraception.5

When prescribing contraception for women aged over 40 years, health professionals should be guided by the MEC. Clinical judgement is also required, particularly when prescribing for women with multiple medical and social factors.

Contraception for the perimenopausal woman

In 2008/2009, data from the Office for National Statistics (UK) indicated that of women aged 40-49 years who were surveyed and using at least one method of contraception, the four most commonly reported methods were sterilisation (either own or partner), the pill, male condoms and intrauterine methods.
Long-acting reversible methods of contraception

The National Institute for Health and Clinical Excellence (NICE) defines long-acting reversible methods of contraception (LARCs) [also referred to as ‘long-lasting reliable contraception’] as those methods that require administration less than once per cycle or month (i.e. the progestogen-only injection and implant, and intrauterine methods). Their typical failure rates are lower than shorter-acting methods such as the contraceptive pill and they are also more cost effective at one year of use. The very long-acting methods such as the progestogen-only implant and the intrauterine methods have failure rates comparable to female sterilisation and thus offer a reliable, reversible alternative for women who do not want to be sterilised or for whom sterilisation is not advised. LARC methods such as the progestogen-only implant and injectable are used to a lesser extent among those aged over 40 years than in younger women, although women over 40 are more likely to report use of intrauterine methods. Faculty of Sexual and Reproductive Healthcare (FSRH) CEU guidance indicates that there is no delay in return of fertility with LARCs, other than with the progestogen-only injectable. Women should be advised that return of fertility can be delayed for up to one year after discontinuation of the progestogen-only injectable, which may be unacceptable to those women who still wish to conceive, given the rapid decline in background fertility in this age group.4

Health benefits and risks associated with CHC use4

Bone health

Women can be advised that CHC use in the perimenopause may help to maintain bone mineral density (BMD).

Dysmenorrhoea and cycle control

Use of CHC may help to reduce menstrual pain and bleeding.

Menopausal symptoms

Women can be advised that in clinical practice CHC may reduce menopausal symptoms.

Women experiencing menopausal symptoms while using CHC may wish to try an extended regimen.

Ovarian and endometrial cancer

CHC use has a protective effect against ovarian and endometrial cancer that continues for 15 years or more after cessation.

Benign breast disease

Women can be advised that there may be a reduction in the incidence of benign breast disease with CHC use.

Colorectal cancer

Women can be advised that there may be a reduction in the risk of colorectal cancer with CHC use.

Breast cancer

Women can be advised that there may be a small additional risk of breast cancer with CHC use, which declines to no risk 10 years after CHC cessation. 4

Cardiovascular and cerebrovascular disease

When prescribing CHC methods to women aged over 40 years, the first choice of pill should be the one containing the lowest dose of EE that provides adequate cycle control.

Women aged 35 years or over who smoke should be advised that the risks of using CHC usually outweigh the benefits. Clinicians should be aware that there may be a very small increased risk of
ischaemic stroke with CHC use.

Women with cardiovascular disease, stroke or migraine with aura should be advised against the use of CHC.

Practitioners who are prescribing CHC to women aged over 40 years may wish to consider a pill with <30 $\mu$g EE as a suitable first choice.

Hypertension may increase the risk of stroke and MI in those using CHC.

Blood pressure should be checked before and at least six months after a woman aged over 40 years starts on CHC and it should be monitored at least annually thereafter.

**Progestogen-only contraception**

- Women can be informed that there is no conclusive evidence of a link between progestogen-only methods and breast cancer.
- Progestogen-only methods may help to alleviate dysmenorrhoea.
- Women should be advised that altered bleeding patterns are common with use of progestogen-only contraception.
- Women should be advised that the levonorgestrel intrauterine system (LNG-IUS) can be used for the treatment of heavy menstrual bleeding once pathology has been excluded.

**Bone health**

- Women should be informed that the progestogen-only injectable is associated with a small loss of BMD, which usually recovers after discontinuation.
- Women who wish to continue using DMPA should be reviewed every 2 years to assess the benefits and risks. Users of DMPA should be supported in their choice of whether or not to continue using DMPA up to a maximum recommended age of 50 years.

**Cardiovascular and cerebrovascular disease**

- Women can be advised that although the data are limited, progestogen-only contraception (POC) does not appear to increase the risk of stroke or MI, and there is little or no increase in VTE risk.
- Caution is required when prescribing depot medroxyprogesterone acetate (DMPA) to women with cardiovascular risk factors due to the effects of progestogens on lipids.

**Emergency contraception**

There are no restrictions on the use of emergency contraception (EC) based on age alone.

EC should be mentioned when discussing contraceptive options as women aged over 40 years may not know how to access EC or how long after unprotected sexual intercourse it can be used.

**Non-hormonal contraception**

**Copper intrauterine device (IUD)**

Women should be informed that spotting, heavier or prolonged bleeding and pain are common in the first 3-6 months of copper IUD use.

**Sterilisation**

Sterilisation (both male and female) is now an outpatient procedure, something that should enhance its acceptance. Individuals considering sterilisation should be advised about all methods of contraception including LARCs. Information should be given on the advantages and disadvantages of sterilisation, including the lower failure rate and lower risk of major complications associated with vasectomy compared to laparoscopic tubal occlusion.

**Barrier contraception**

Men and women can be advised that when used consistently and correctly, male condoms and female condoms are up to 98% and 95% effective at preventing pregnancy, respectively.

Women can be advised that when used consistently and correctly with spermicide, a diaphragm and caps are, respectively, estimated to be between 92% and 96% effective at preventing pregnancy.

When using lubricant with latex condoms a non-oil-based preparation is recommended.

**Natural family planning**

The numbers of women over the age of 40 years who rely on fertility awareness methods are unknown. When approaching the menopause, natural family planning may become more difficult due to menstrual cycle irregularity and the increase of anovulatory cycles making it difficult to interpret ovulatory mucus.
Withdrawal

Though not promoted as a method of contraception, use of withdrawal (*coitus interruptus*) is reported by approximately 6% of women aged 40-44 years of age and 4% of women aged 45-49 years. A recent review has suggested that data on withdrawal use may underestimate the numbers of couples actually using this method and that more research is needed. Withdrawal, if used correctly (i.e. withdrawal before ejaculation every time), may work for some couples, particularly as a backup to other methods. However, couples considering withdrawal should be made aware that it may be less effective than other methods of contraception.

Diagnosing the menopause

The menopause is usually diagnosed clinically and in retrospect after one year of amenorrhoea. There is no single independent biological marker of the perimenopause. Serum levels of FSH, estrogen and progesterone fluctuate around the menopause while levels of luteinising hormone (LH) remain within the normal range. An increase in FSH stimulates ovarian folliculogenesis, which occurs at an accelerated rate up until the menopause, when all follicles are depleted. Increased folliculogenesis results in increased estrogen production, which may contribute to irregular bleeding and symptoms such as bloating and breast tenderness. An elevated serum FSH level indicates a degree of ovarian failure but it is not predictive of when final sterility has been reached. A woman’s age and menstrual cycle/bleeding patterns may be the most useful factors in determining the likelihood of the approaching menopause, unless menstrual bleeding patterns are altered by hormonal contraception.

Stopping contraception

Women may need advice on stopping contraception around the menopause. In general the guidelines advise that contraception may be stopped at the age of 55 years; however, this advice may need to be tailored to the individual woman. Women who are not using hormonal contraception and who continue to have regular menstrual bleeding at the age of 55 years should continue with some form of contraception. While MEC do not give an upper age limit for the use of CHC or the progestogen-only injectable, the guidelines do not recommend use of these methods beyond the age of 50 years. Ideally women over 50 years should be advised to switch to an alternative method such as the POP, implant, LNG-IUS or barrier method until the age of 55 years or until the menopause can be confirmed. Women who have been diagnosed with premature ovarian failure may occasionally have spontaneous return of ovarian activity and should be referred to a specialist for contraceptive guidance (Table 1).

Non-hormonal methods

Women using non-hormonal methods of contraception can be advised to stop contraception after one year of amenorrhoea if aged over 50 years, or two years if the woman is aged less than 50 years. After counselling (about declining fertility, risks associated with insertion and contraceptive efficacy), women who have a copper IUD containing ≥300 mm² copper inserted at or over the age of 40 years can retain the device until the menopause or until contraception is no longer required. Women who continue to use their IUD until contraception is no longer required should be advised to return to have the device removed.

Hormonal methods

Women using exogenous hormones should be advised that amenorrhoea is not a reliable indicator of ovarian failure. In women using contraceptive hormones, FSH levels may be used to help diagnose the menopause, but should be restricted to women over the age of 50 years and to those using progestogen-only methods. FSH is not a reliable indicator of ovarian failure in women using combined hormones, even if measured during the hormone-free interval. Women over the age of 50 years who are amenorrhoeic and wish to stop POC can have their FSH levels checked. If the level is ≥30 IU/l the FSH should be repeated after six weeks. If the second FSH level is ≥30 IU/l contraception can be stopped after one year. 

4
Removing the LNG-IUS

Women who have their LNG-IUS inserted for contraception at the age of 45 years or over can use the device for seven years (off licence) or, if amenorrhoeic, until the menopause, after which the device should be removed.

Hormone replacement therapy (HRT) and contraception

Women using HRT should be advised not to rely on this as contraception.

Conclusion

Perimenopausal women may have potential fertility and therefore need good advice from clinicians to help support them in the use of safe and effective contraception. Guidelines are available to assist with appropriate prescribing. The non-contraceptive benefits to this group of women can improve their quality of life through a time of change. The change to hormonal therapy from contraception needs to be carefully managed.

Table 1 Advice for women on stopping contraception

<table>
<thead>
<tr>
<th>Contraceptive method</th>
<th>Advice on stopping contraception</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-hormonal</td>
<td>Stop contraception after 2 years of amenorrhoea</td>
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<tr>
<td></td>
<td>Stop contraception after 1 year of amenorrhoea</td>
</tr>
<tr>
<td>CHC</td>
<td>Can be continued up to age 50 years&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>Stop CHC at age 50 years and switch to a non-hormonal or progestogen-only method, then follow appropriate advice</td>
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<tr>
<td>DMPA</td>
<td>Can be continued up to age 50 years&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>Stop DMPA at age 50 years and choose from options below:</td>
</tr>
<tr>
<td></td>
<td>Switch to non-hormonal method and stop after 2 years of amenorrhoea</td>
</tr>
<tr>
<td></td>
<td>OR</td>
</tr>
<tr>
<td></td>
<td>Switch to the POP, implant or LNG-IUS and follow advice below</td>
</tr>
<tr>
<td>Implant POP LNG-IUS</td>
<td>Can be continued up to age 50 years or longer&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>Continue method</td>
</tr>
<tr>
<td></td>
<td>If amenorrhoeic either check FSH levels and stop method after 1 year if serum FSH is ≥30 IU/L on two occasions 6 weeks apart</td>
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<tr>
<td></td>
<td>OR</td>
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<tr>
<td></td>
<td>Stop at age 55 years when natural loss of fertility can be assumed for most women</td>
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<td></td>
<td>If not amenorrhoeic, consider investigating any abnormal bleeding or changes in bleeding pattern, and continue contraception beyond age 55 years until amenorrhoeic for 1 year</td>
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</tbody>
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<sup>a</sup>If a woman wishes to stop hormonal contraception before age 50 years she should be advised to switch to a non-hormonal method and to stop once she has been amenorrhoeic for 2 years (or 3 years if switched from DMPA due to the potential delay in return of ovulation).

CHC, combined hormonal contraception; DMPA, depot medroxyprogesterone acetate; FSH, follicle-stimulating hormone; IU, international unit; LNG-IUS, levonorgestrel-releasing intrauterine system; POP, progestogen-only pill.

References

5. WHO Medical Eligibility Criteria on line: http://www.who.int/reproductivehealth/publications/family_planning

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