6 Maintaining sexual health and contraception

At a glance

- Contraception should be discussed with all peri- and early postmenopausal women.
- Most contraceptive methods are suitable for healthy non-smoking women up to age 50 years.
- Copper intrauterine contraceptive devices fitted at age 40 years or over can be retained until menopause is confirmed.
- The levonorgestrel-releasing intrauterine system can be retained in amenorrhoeic women until menopause is confirmed if fitted at 45 years or over.
- The levonorgestrel-releasing intrauterine system can be used for endometrial protection for up to five years alongside estrogen therapy but then must be changed.
- Consider sexually transmitted infection in older women and offer testing if indicated.
- Urogenital atrophy is common and should be part of every menopause consultation.
- Low-dose vaginal estrogens should be offered to women with symptoms and should be continued as long as required for symptom relief.
- Systemic absorption of vaginal estrogens is minimal and there is no need to monitor the endometrium.
- Lubricants and moisturisers can be used alongside vaginal estrogens.
- Sexual problems in the peri- and postmenopause are common and should be raised as part of the consultation. Referral for specialist advice may be required.

Maintaining sexual health in the peri- and postmenopause is a key component of menopause management. Contraception and the overlap with managing menopausal symptoms in the perimenopause can be challenging and there is an increasing focus on postmenopausal sexual health as women survive longer and continue to desire an active and

fulfilling sex life for many years after the menopause. The average age for divorce in England and Wales is around 42 years, so many individuals will start a new relationship around this time and consequently will require contraception, sexual health screening and information around safer sex. This can present challenges to health professionals, as these women may not perceive themselves to be at risk of pregnancy or infection.

The National Institute for Health and Care Excellence (NICE) guidelines state that women in the perimenopause should be given information about contraception, the contraceptive options available and the duration of use.[1]

Fertility

As age increases, fertility declines for women and, to a lesser extent, men, This decrease in fertility is influenced by many factors, including frequency of intercourse, sexual problems in both partners and number and quality of oocytes. Fertility decreases from the mid-30s, although there are well-documented records of births to women in their 50s. The oldest woman known to have given birth after conceiving without medical intervention was aged 57 years and 129 days. When an unplanned pregnancy occurs, it can be difficult to deal with and both termination of pregnancy and childbirth are associated with a higher morbidity and mortality. Older women have a higher risk of pregnancy-induced hypertension, pre-eclampsia and gestational diabetes. The risk of fetal malformation increases, with an increase in chromosomal disorders such as Down's syndrome, as does the risk of miscarriage. Despite these risks, many women are delaying pregnancy until their 40s. Between 2011 and 2012, conception rates increased for women over 35 years and decreased for women under 35 years. The largest increase was in women aged 35–39 years (1%). There was a slightly smaller increase for women over 40 years (0.7%). Conception rates for women over 40 years have doubled since 1990 from 6.6% to 14% and the actual number of conceptions has increased from 12,032 in 1990 to 29,000 in 2012. At the same time, the percentage of pregnancies leading to termination has fallen from 43% to 28%, indicating that many of these pregnancies were planned.

Duration of contraceptive use in the perimenopause

The normal recommendation is to continue contraception after the final menstrual period for at least two years if the woman is younger than 50 years and at least one year if she is older than 50. Condoms can continue to be used in postmenopausal women to reduce the risk of transmission of

sexually transmitted diseases. The final menstrual period can be identified only retrospectively and may be difficult to identify in women who use a contraceptive method that renders them amenorrhoeic and in those who take a combined oral contraceptive or monthly sequential hormone replacement therapy (HRT) that induces cyclical withdrawal bleeding. HRT does not provide contraception.

Contraceptive options in the perimenopause

A variety of contraceptive methods are available and all methods are more effective in women over 35 years as fertility declines. Age may, however, become a more significant risk factor for medical conditions, which may affect contraceptive options available. The ideal contraceptive is effective, safe, free from adverse effects, acceptable to all and, ideally, has non-contraceptive benefits such as reducing heavy menstrual bleeding. For older women, a permanent method, vasectomy or female sterilisation may be an option. Individual contraceptive choice is dictated by many factors such as previous experiences, influence of partner, family and peers, the media, perceived adverse effects and risks, and frequency of intercourse.

A good history will enable the health professional to assess sexual function, risk of sexually transmitted infection (STI), medical and social factors which may influence contraceptive choice. The UK Medical Eligibility Criteria for Contraceptive Use provides evidence-based guidance to aid clinicians in helping the individual to make an informed choice.[2] The Faculty of Sexual and Reproductive Healthcare (FSRH) Clinical Effectiveness Unit has developed evidence-based guidelines for all methods of contraception and contraception for specific groups, including women over 40 years.[1]

Long-acting reversible contraception

NICE published guidance on long-acting reversible contraception (LARC) in 2005 (and updated 2014),[3] which defines LARC methods as those which require administration less than once per cycle or month. These methods are:

- the copper intrauterine device which lasts between five and ten years
- the levonorgestrel-releasing intrauterine system, which lasts for five years
- the contraceptive implant, which lasts for three years
- the intramuscular injection, which lasts up to 14 weeks.

Since the NICE guidelines were published, two further methods, the subcutaneous progestogen injection, Sayana Press® (Pfizer), and the smaller three-year hormonal intrauterine system, Jaydess® (Bayer), have been licensed in the UK and must also be included as LARC methods.

All the LARC methods are much more effective at preventing pregnancy than the other methods, as they require little or no input from the user; they are considered to be 'fit and forget' methods.

Copper intrauterine contraceptive devices

Copper intrauterine contraceptive devices (IUCD) can be used in perimenopausal women and, if fitted after the age of 40 years, can be left in place until after the menopause has been confirmed. IUCD contain no hormones and do not interfere with the diagnosis of the menopause. There is no upper age limit for their use and HRT can be prescribed alongside the IUCD. The main disadvantage of the IUCD is that it may cause periods to become longer and heavier. Abnormal bleeding in women aged 45 years or over, including in those with an IUCD in place, should be managed according to NICE guidance.[4]

Levonorgestrel-releasing intrauterine systems

Levonorgestrel-releasing intrauterine systems that contain progestogen suppress the endometrium, leading to amenorrhoea in many women. Such systems can be used to treat heavy menstrual bleeding after appropriate investigation. The progestogen also thickens cervical mucus inhibiting the passage of sperm.

Mirena® (Bayer) is licensed for five years of use as a contraceptive but there are good data that it is effective for at least seven years and FSRH guidance is that it can be left in place for seven years when fitted in women aged 45 years or above.[1] In women who are 45 years and above and amenorrhoeic, it can be left until after menopause has been confirmed. Mirena is also licensed for four years as the progestogen component of HRT and be used alongside systemic estrogen by any route. Guidance from the FRSH is that the Mirena may be used for five years as part of HRT (off-licence use) but it must be changed after five years.[1] The intrauterine system is therefore a very useful method for this group of women, as it provides excellent contraception, menstrual control and period-free HRT. There is no upper age limit and the menopausal status can be checked in amenorrhoeic women not taking oral estrogen.

A new intrauterine system, Jaydess was launched in 2014. At the time of writing, this system has a three-year licence for contraceptive use only and is not licensed to be used as part of HRT.

Before fitting or changing an IUCD or intrauterine system, a full sexual health history should be taken to identify women at risk of STIs and appropriate screening tests offered. Any STIs will need to be treated with appropriate investigation and management of any partner(s).

Subdermal contraceptive implants

Nexplanon® (Merck Sharpe & Dohme) is a progestogen-only implant containing etonogestrel. It is fitted in the non-dominant arm during a very short minor procedure and lasts for three years. It is the most effective reversible method with a failure rate of less than one in 1000 over three years. There is no upper age limit and menopausal status can be confirmed. Irregular bleeding is the main adverse effect of this method and may limit the use of the device. Heavy or irregular bleeding in women over 45 years must be investigated according to NICE guidance.[4]

HRT can be used in addition to the implant but the FSRH recommends that either cyclical or continuous combined HRT is used, as endometrial protection cannot be assumed from the implant itself. There is no upper age limit for the implant.

Progestogen-only injectables

Depo medroxyprogesterone acetate 150 mg given by deep intramuscular injection every 12–14 weeks is a highly effective method with a failure rate of less than 1%. It is very likely to cause amenorrhoea. As it is associated with a small decrease in bone density in some women, all women using this method should be assessed for risk factors for osteoporosis at five years and reviewed every two years to re-evaluate the risks and benefits. Women with significant lifestyle or medical risk factors for osteoporosis should be advised about alternative methods of contraception. There is no information about the use of Sayana Press, a subcutaneous long-acting reversible progestogen-only contraceptive, now licensed for self-administration, in perimenopausal women at this time but the risks and benefits appear to be very similar to the intramuscular injection.

Combined hormonal contraception

Combined hormonal contraception includes the combined pill, the contraceptive transdermal patch (Evra®, Janssen-Cilag) and the vaginal

ring (NuvaRing®, Merck Sharp & Dohme). These methods mostly contain a synthetic estrogen, ethinylestradiol, combined with a progestogen. They work by suppressing ovulation and can be very effective but are dependent on user compliance. They can be very useful in non-smoking, normotensive women over the age of 35 years, as they control bleeding and can give some relief of menopausal symptoms. They do, however, mask the menopause and the FSRH recommends that after 50 years the risks start to outweigh the benefits.[1] There are many more contraindications to estrogen-containing contraception, such as a past history of deep vein thrombosis or focal migraine with aura, than with any of the other methods. Qlaira® (Bayer) and Zoely® (Merck Sharp & Dohme) are two more recent contraceptive pills in the UK containing a naturally occurring estrogen, estradiol valerate, in combination with a progestogen. These are long-cycle pills giving excellent cycle control and fewer withdrawal effects as they have a shorter pill-free interval. They can be a very useful in the perimenopause, providing contraception, menstrual control and symptom relief. As with the other combined methods, the current advice is to stop at 50 years as the risks start to outweigh the benefits for contraception.

Progestogen-only contraceptive pill

The progestogen-only contraceptive is very effective in women over 35 years and consists of a daily pill. The older pills work by forming a mucous plug in the cervix, which inhibits the passage of sperm. Newer pills, such as Cerazette® (Merck Sharp & Dohme) and Cerelle® (Gedeon Richter) contain higher doses of progestogen and suppress ovulation. There is no upper age limit and no increased risk of venous thromboembolism. They do not mask the menopause and can be used in conjunction with combined HRT for symptom relief (off-licence use).

Barrier and natural methods

Male and female condoms

There is no age restriction on the use of barrier methods and few conditions that would restrict their use. It is no longer recommended that condoms are used with spermicide, because of the increased risk of HIV transmission associated with mucosal irritation. Oil-based lubricants damage condoms and should be avoided. Risk of rupture is increased in association with mucosal atrophic changes and water-based lubricants should be recommended.

Diaphragms and caps

The use of the spermicide nonoxynol-9 is recommended with both diaphragms and caps. Mucosal atrophy or prolapse of the vaginal wall, or both, may cause difficulties with fitting or retention. Preparations, including estrogen creams and non-hormonal lubricants, may damage the rubber used in condoms and diaphragms, leading to rupture.

Natural family planning

Unpredictable cycles, inconsistent temperature changes and atypical mucous changes in the perimenopause make the method unreliable. Methods that depend on the detection of the hormonal changes at ovulation are unreliable for women in the perimenopause.

Coitus interruptus

Coitus interruptus is unreliable but a method of choice for some couples. A survey in 2009 indicated that many more couples than previously thought use this method.[5] Many use it intermittently with male condoms. The failure rate for this method is similar to that of condoms ranging from 4–20%.

Sexual health

The prevalence of STIs in women over the age of 50 has risen over the last 10 years, although the actual numbers are still quite small compared with younger women. Many factors contribute to this increase, including the breakdown of long-term relationships, new relationships, reduced mucosal protection due to atrophic changes, lack of education and knowledge about STIs and confusion between symptoms of STIs and symptoms of urogenital atrophy. Many women will delay seeking help because of embarrassment and self-treatment. This can lead to delay in diagnosis and development of problems such as pelvic pain, dyspareunia and postcoital and intramenstrual bleeding.

Urogenital atrophy

The lower urinary and genital tracts have a common embryological origin and estrogen and progesterone receptors are widespread in the vagina, urethra, bladder and pelvic floor musculature. With falling levels of estrogen, atrophic changes start to occur. The vaginal epithelium becomes

thin, loses its rugae and becomes pale or erythematous, with fine petechial haemorrhages. The maturation index shifts, leading to basal and parabasal cells in the surface layer. An increase in vaginal pH, attributable to lower production of lactic acid, permits the growth of pathogens. Vaginal and cervical secretions also decrease, leading to reduced lubrication. Unlike vasomotor symptoms, which usually settle over time, atrophic symptoms are often progressive and last for many years. Up to 40% of women will experience symptoms but only 25% will seek help. The resulting symptoms include dyspareunia, itching, burning and dryness, which can coexist with urinary symptoms (Table 6.1). The existence and prevalence of these symptoms is often underestimated, as women may be too embarrassed to mention them or seek help. Health professionals should always enquire directly about such symptoms.

This combination of atrophic changes and symptoms is usually referred to as vulvovaginal or urogenital atrophy, although the North American Menopause Society has introduced the term 'genitourinary syndrome of the menopause', which is becoming more widely adopted.

Treatments for urogenital atrophy

Estrogen-based treatments

Vaginal estrogens are extremely effective at relieving the symptoms of urogenital atrophy and can be used safely in women who do not wish to

Table 6.1

Symptoms of urogenital atrophy (genitourinary syndrome of the menopause)

Site of atrophy	Symptoms
Vagina	Dryness Burning Pruritus Dyspareunia Prolapse
Urinary tract	Urgency Frequency Dysuria Infection Incontinence Voiding difficulties

take or cannot tolerate systemic HRT and simply require relief of local symptoms. Treatment options include low-dose natural estrogens, such as vaginal estradiol by tablet or ring or estriol cream. Creams may affect condom integrity. Systemic absorption with estradiol vaginal tablets or ring is minimal but is greatest during the first few days of administration when the vaginal epithelium is still atrophic. Absorption remains low with no systemic effects and hormone levels remain within the postmenopausal range. There is thus no need to add a progestogen for endometrial protection. Vaginal estrogens can also be used in combination with systemic estrogens for women with severe local symptoms who have not responded to systemic therapy. NICE guidance[6] concludes that local vaginal estrogens are effective in the short and long term, they should be offered to women with vulvovaginal atrophy, including those on systemic HRT, and should be continued for as long as needed to relieve symptoms. Women should be informed that symptoms often recur when treatment is stopped. Low-dose vaginal estrogens can be used for women in whom systemic HRT is contraindicated but a menopause specialist should be consulted first. There is no requirement to monitor the endometrium in women using low-dose vaginal estrogens, and moisturisers and lubricants can be used alongside them.

Non-estrogen-based treatments

While many lubricants and vaginal moisturisers are available without prescription, several lubricants and moisturisers can be prescribed in the UK (lubricants: YES and Sylk; moisturisers: Replens, Regelle and Hyalofemme). Lubricants are usually used to relieve vaginal dryness and can be prescribed for women for whom estrogens are contraindicated or who do not wish to use estrogen-based treatments, although they can be used in conjunction with vaginal estrogens. Lubricants should be applied before sexual intercourse. Women should be aware that petroleum-based lubricants and baby oil can compromise the integrity of condoms and diaphragms, which is important when condoms are used for contraception or to prevent sexually transmitted infections. YES is available as a water-based lubricant and also as an oil-based lubricant containing sunflower oil, shea butter and bees wax. The oil-based product is not compatible with condoms. Sylk is a plant-based water-soluble lubricant, which can be used with condoms. Vaginal moisturisers are water based and line the vaginal walls delivering continuous moisture. They provide longer relief of symptoms and should be used regularly every few days and not just before sexual intercourse. They are compatible with condoms.

Ospemifene

Ospemifene is the first oral treatment approved by the US Food and Drug Administration for treating vulvovaginal atrophy. It is a selective estrogen receptor modulator (SERM) with estrogen-like effects on the vaginal epithelium. A daily dose of 60 mg has been shown to reduce vaginal dryness and dyspareunia. Its safety profile has been reviewed after 12 months of therapy with no clinically relevant adverse effects. Although it has been licensed, it is not yet available in the UK and as such was not recommended in the 2015 NICE menopause guideline.

Sexual dysfunction

Women are increasingly staying sexually active into their 70s and beyond. Thus, their sexual problems need to be addressed. The term 'female sexual dysfunction' is often now used and there is an international classification system which was developed by the International Consensus Development Conference on Female Sexual Dysfunction.

Sexual problems in women are common. It has been estimated that they affect about one in two women. Interest in sex declines in both sexes with increasing age, and this change is more pronounced in women. The US National Health and Social Life survey, considered to be the most comprehensive representative survey to date of sexual behaviour in the United States, which was undertaken in people aged 18–59 years, reported that sexual dysfunction is more prevalent in women (43%) than men (31%).[7] Another US study of 1550 women and 1455 men aged 57–85 years found that the prevalence of sexual activity declined with age (73% among respondents who were 57–64 years of age, 53% among respondents who were 65–74 years of age, and 26% among respondents who were 75–85 years of age); women were significantly less likely than men at all ages to report sexual activity.[8] The most prevalent sexual problems among women were low desire (43%), difficulty with vaginal lubrication (39%), and inability to climax (34%).

The underlying reasons for female sexual dysfunction can be divided into hormonal and non-hormonal. Postmenopausal estrogen deficiency causes atrophic changes. The vaginal mucosa becomes thinner and dry and the vulva and the vaginal walls also become pale and thin and lose their elasticity. Vaginal secretions also decrease, leading to reduced lubrication. Reduced levels of estrogen can also impair peripheral sensory perception and women may experience discomfort after contact with the skin by clothes or their partner. Dyspareunia is likely to lead to avoidance of sexual activity and anticipation of pain leads to lack of arousal, loss of

orgasm and increased chance of pain recurring. Non-hormonal factors, such as conflict between partners, insomnia, inadequate stimulation, life stress or depression may also be important contributors to a woman's level of interest in sexual activity. In addition, male sexual problems – for example, loss of libido and erectile difficulties – should not be overlooked.

The impact of surgical menopause on sexual function can be variable and depends on several factors such as age, preoperative mental health and sexual function, the indications for surgery, the specific procedure being performed, and whether or not estrogen is used postoperatively. The majority of research shows improved psychological wellbeing and sexual function after hysterectomy for benign disease. However, women with depression or sexual problems preoperatively are at increased risk of experiencing a worsening of mood and libido postoperatively.

Lack of sexual desire

Lack of sexual desire is a common problem, affecting around 40% of postmenopausal women. Management plans can be divided into non-hormonal and hormonal, which can be used together. Psychosexual therapy (or psychosexual counselling) has proven success rates. Both partners should be encouraged to attend. Following initial assessment, the therapist will give the couple information about how sexual problems arise and the various treatment options available. It is important to ensure that the sex therapist is qualified and abides by the codes of ethics of an appropriate professional body.

Testosterone therapy

Several studies have shown the benefit of testosterone therapy in postmenopausal women but mainly in those using estrogen (not conjugated estrogens). In the UK, the only licensed preparations for women for many years were subcutaneous implants or pellets to be put under the skin under local anaesthesia. However, these are no longer available. Alternative unlicensed implants are available in limited centres. Testosterone patches for women, which were originally licensed, are also no longer widely available. Most clinicians are now recommending a testosterone gel (such as Testim®, Ferring, or Testogel®, Besins Healthcare) to women but this is off-license use, as these products are only licensed to be used in men. The dosage should be adjusted accordingly (Chapter 7). Testosterone levels may be monitored in women using these products to ensure that levels of testosterone remain within the normal physiological range for women.

Tibolone is a synthetic steroid with estrogenic, progestogenic and androgenic properties. Its therapeutic indication is the treatment of estrogen deficiency symptoms (including vasomotor symptoms, depressed mood, decreased libido) in postmenopausal women.

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