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An update on contraception
Part 2: rings, implants and injections

Long-acting reversible hormonal contraceptives are less prone to issues with compliance than the more commonly used combined pill and have great potential to reduce unplanned pregnancies. It is important to include a discussion of their use in routine contraceptive counselling and encourage uptake, particularly in women who are at high risk of unplanned pregnancies.

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This article, the second in a series of three on contraception, considers some of the long-acting reversible contraceptives (LARCs), defined here as a method that requires administering once or less per cycle. The LARCs available in Australia are:

- etonogestrel implants (Implanon Implant)
- combined hormonal vaginal ring containing ethinyloestradiol and etonogestrel (NuvaRing)
- copper intrauterine devices (IUD; Multiload-Cu375, TT380) and levonorgestrel IUDs (Mirena).
- depot medroxyprogesterone acetate (DMPA) injection (Depo-Provera, Depo-Ralovera)

A woman's choice between these methods will be directed by a variety of factors including age, personal preference, cost, availability, fear of injections, tolerance of irregular bleeding, privacy needs, drug interactions and lactation. Although the levonorgestrel IUD is a hormonal method of contraception, this article will only discuss the hormonal LARC methods that act systemically via the hypothalamic–pituitary–ovarian axis to prevent ovulation (copper and levonorgestrel IUDs will

IN SUMMARY

- **A woman's choice between the different contraceptive methods will be directed by a variety of factors including age, personal preference, cost, availability, fear of injections, tolerance of irregular bleeding, privacy needs, drug interactions and lactation.**
- **Long-acting reversible contraceptives (LARCs) are underused in Australia. They are less prone to issues with compliance than the more commonly used combined pill and have great potential to reduce unplanned pregnancies.**
- **LARCs such as the vaginal ring, etonogestrel implant and depot medroxyprogesterone acetate (DMPA) injection can be administered any time in a woman's menstrual cycle as long as pregnancy has been excluded. They are immediately effective if initiated on day one to five of a normal cycle.**
- **The vaginal ring, implant and DMPA injection have the advantage of a low user input once initiated, and all three methods can be used to treat dysmenorrhoea.**
- **It is important to include a discussion of LARCs use in routine contraceptive counselling and encourage uptake, particularly in women who are at high risk of unplanned pregnancies.**

be discussed in the third article in this series). All guidance is based on *Contraception: an Australian Clinical Practice Handbook* produced by Sexual Health & Family Planning Australia (SH&FPA).[1] The handbook can be purchased by visiting your local state or territory Family Planning organisation website or following the link from the SH&FPA website (www.shfpa.org.au).

Limited data available on contraceptive practices of women in Australia show that the combined pill and condoms are the most commonly used reversible contraceptive methods. These methods have a high level of efficacy with perfect use (i.e. no user mistakes); unfortunately the efficacy rate is much lower with typical use, most likely because they require a high degree of day-to-day attention.

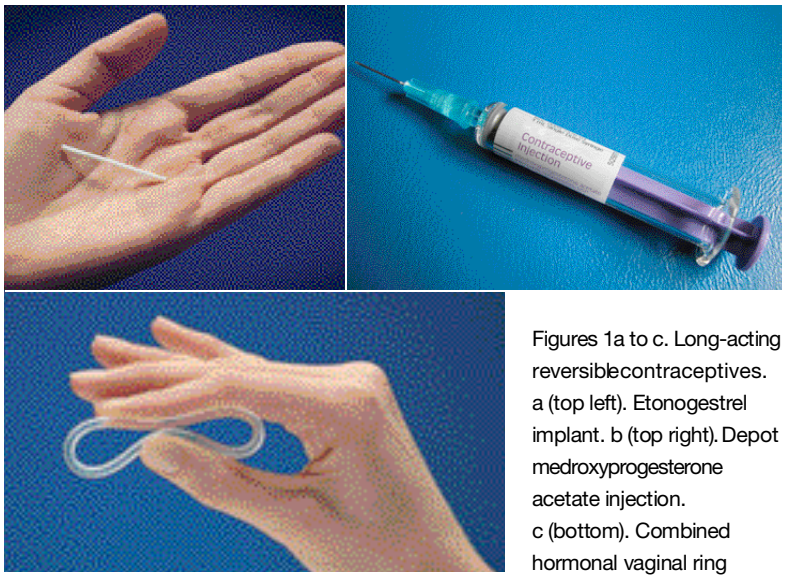
Accordingly, attention has turned to the less frequently used LARCs. These methods require less user input once initiated and generally have the advantage of higher rates of efficacy with typical use. Higher user rates of LARCs are associated with fewer unplanned pregnancies, with international research showing that teenagers who have recently been pregnant and now use a long-acting injectable contraceptive or implant are at a significantly lower risk of a repeat pregnancy within a year than those who take the pill.[2,3] Injections and implants are more cost effective than the pill even if used for less than a year. Discussion of LARCs should therefore be a standard part of any contraceptive consultation.[4]

As in the previous article in this series, Categories 1 to 4 of the UK medical eligibility criteria for contraceptive use 2005/2006 (Table 1) are used to describe levels of contraindication to the use of contraceptive methods.[5]

It is important to discuss the range of contraceptive options and the pros and cons of each method related to the individual's needs. Written information can help a woman decide which method is best for her, and fact sheets on all methods of contraception can be downloaded free of charge from your state or territory's Family Planning Association website.[1]

Administration

The vaginal ring, etonogestrel implant and DMPA injection can be administered at any time in a woman's cycle as long as pregnancy has been excluded (see the box on this page). They are immediately effective if initiated on day one to five of a normal menstrual cycle (day one is the first day of bleeding in a normal menstrual cycle; day five is four days later). All three methods will be effective after a maximum of seven days from administration, depending on the circumstances (Tables 2 and 3).



Figures 1a to c. Long-acting reversible contraceptives. a (top left). Etonogestrel implant. b (top right). Depot medroxyprogesterone acetate injection. c (bottom). Combined hormonal vaginal ring containing ethinyloestradiol and etonogestrel.

The etonogestrel implant is a soft flexible single rod impregnated with 68 mg etonogestrel, which is released slowly over three years once implanted. It is inserted subdermally at the inner side of the nondominant upper arm about 8 to 10 cm above the medial epicondyle of the humerus. It should be replaced before three years of use have passed.

DMPA is given as a deep intramuscular injection of 150 mg/mL of depot medroxyprogesterone acetate suspension. The injection site should not

Excluding pregnancy

Pregnancy can be excluded with a high degree of confidence if:

- a woman has not had sex since the start of last normal period; or
- she is at day one to five of a normal menstrual cycle; or
- her urinary pregnancy test is negative and she has not had unprotected sex for at least three weeks prior to the test.

If pregnancy is not confidently excluded before initiating a method of contraception, a pregnancy test should be performed four weeks later.

continued

Table 1. The UK Medical Eligibility Criteria (UKMEC) Categories* for hormonal LARCs

Circumstances	UKMEC Category*		
	Etonogestrel implant	DMPA	Vaginal ring
Aged under 18 years	1	2	1
Aged 40 to 45 years	1	1	2
Aged over 45 years	1	2	2
Current breast cancer	4	4	4
Past history of breast cancer not active for five years	3	3	3
Past history of arterial disease	2	3	4
Develops arterial disease while using the method	3	3	4
Past history of migraine with aura	2	2	4
Develops migraine with aura while using the method	3	3	4
BMI 30–34 kg/m^2	1	1	2
BMI 35–39 kg/m^2	1	1	3
BMI ⩾40 kg/m^2	1	1	4
Hypertension systolic ⩾160 mmHg or diastolic ⩾95 mmHg	1	2	4
Women aged >35 years and smoking ⩾15 cigarettes per day	1	1	4
Diabetes, no vascular disease and <20 years' duration	2	2	2
Diabetes with micro- or macrovascular disease or >20 years' duration	2	3	3/4
Multiple risk factors for cardiovascular disease (e.g. age, smoking, diabetes and hypertension)	2	3	4
Current VTE (taking warfarin)	3	3	4
Past history of VTE or known thrombogenic mutation	2	2	4
Severe cirrhosis	3	3	4
Mild cirrhosis	2	2	3
Hepatitis B or C carrier with no cirrhosis	1	1	1

*** UKMEC Categories**
Category 1: A condition for which there is no restriction for the use of the contraceptive method.
Category 2: A condition where the advantages of using the method generally outweigh the theoretical or proven risks.
Category 3: A condition where the theoretical or proven risks usually outweigh the advantages of using the method.
Category 4: A condition that represents an unacceptable health risk if the contraceptive method is used.

be rubbed. DMPA injection should be repeated every 12 weeks (± 2 weeks) but can be given up to 16 weeks since the last injection with a low risk of pregnancy.[6]

The vaginal ring is a soft flexible ring impregnated with ethinyloestradiol and the progestogen etonogestrel, which are released into the circulation through the vaginal wall at a rate of 15 µg and 120 µg per day, respectively. The vaginal ring has the lowest oestrogen exposure of the available combined contraceptives. It is inserted into the vagina and left for three weeks, after which it is removed and disposed of. There is a ring-free week during which a woman usually experiences a withdrawal bleed and after which a new ring is inserted.

Cost

Both the etonogestrel implant and DMPA are PBS listed and hence inexpensive for women with Medicare or healthcare cards. However, costs associated with regular visits for intramuscular injections of DMPA and for the etonogestrel implant insertion and removal, as well as the limited availability of a trained practitioner, may create barriers for some potential users. The vaginal ring is not PBS listed and costs vary from around $20 to $30 per ring. Per cycle this is similar to the cost of some of the newer combined contraceptive pills.

Efficacy and continuation rates

All three methods are highly effective with efficacy rates of 99.7%, more than 99.9% and 99.7% for perfect use of DMPA, etonogestrel implant and the vaginal ring, respectively. Efficacy rates of DMPA for less than perfect use due to late or missed injections is 97%, and are more than 99.9% and 92% for typical use of the etonogestrel implant and vaginal ring, respectively.[7]

As there are few community studies of the vaginal ring, this efficacy of typical use is assumed to be the same as that of the combined pill. It is hoped, however, that the true figure for typical use for the vaginal ring will be higher, particularly with the widespread use of mobile phone

continued

Table 2. Initiation of etonogestrel implants, DMPA injections and vaginal rings

Previous contraceptive method	Timing of initiation of new method	When new method becomes effective
No contraception or barriers	Day one to five of a cycle*	Immediately
	Any other time (ensure pregnancy has been excluded)†	Seven days
Combined pill or vaginal ring	Any time if pills/vaginal ring have been taken/used correctly	Immediately
Progestogen-only pills	Any time if pills have been taken correctly; otherwise ensure pregnancy has been excluded	Seven days
DMPA injection	Any time if within 14 weeks of last injection	Immediately
Etonogestrel implant	Any time if within three years of implant insertion	Seven days (however, if a new etonogestrel implant is inserted it will be effective immediately)
Abortion	Within five days of an abortion	Immediately‡
Copper IUD or levonorgestrel IUD	Day one to five of a cycle and regular menstruation*	Immediately
	Any other time and regular menstruation	Seven days (or where possible begin new method seven days before removal). Use condoms for seven days prior to removal of IUD
Levonorgestrel IUD	Any time and irregular cycle or amenorrhoea	Seven days (or where possible begin new method seven days before removal)
Hormonal emergency contraception	Immediately	Seven days§ (etonogestrel implant or DMPA are not recommended until pregnancy has been excluded)

ABBREVIATIONS: DMPA = depot medroxyprogesterone acetate; IUD = intrauterine device.
* Day one is the first day of bleeding in a normal menstrual cycle. Day five is fours days later. † See the box on page 37 for how to exclude pregnancy. If pregnancy is not excluded before initiating a method of contraception a pregnancy test should be performed in four weeks' time. ‡ It may be difficult to determine whether irregular bleeding is related to the termination of pregnancy or due to initiation of a hormonal method of contraception. § The woman should be advised to return in four weeks' time for a pregnancy test.

reminders and women in Australia having access to a free SMS and/or an email reminder service made available by the manufacturer. Continuation rates for DMPA and the vaginal ring in Australia are unknown. In the USA, around 55% of women who have DMPA injections will have continued the method at one year.[7] Unpublished Australian data suggest that after insertion around 74% and 50% of women continue to use etonogestrel implants at the end of one and two years, respectively.

Advantages and disadvantages

DMPA injections, etonogestrel implants and the vaginal ring have the advantage of a low user input compared with the pill and condoms, and all three methods can be used to treat dysmenorrhoea. As non-oral methods, they may be useful for women with inflammatory bowel disease or other malabsorption conditions. Women who have DMPA injections or an etonogestrel implant may achieve amenorrhoea, and women who use the vaginal ring usually experience light regular predictable withdrawal bleeds. Vaginal ring cycles can be run together, replacing the ring every three to four weeks to manipulate cycles. Both the etonogestrel implant and vaginal ring are rapidly reversible. Both may improve acne, although some women will develop this condition for the first time during their use. DMPA and the vaginal ring are very private methods of contraception (that is, their use is easy to conceal from others).

All three methods of contraception have inflexible dosing regimens. The vaginal ring may be costly, may cause device-related side effects and may accidentally fall out, and vaginal administration is not acceptable for some women. DMPA cannot be withdrawn once given so side effects may persist for some time. It is also associated with loss of bone density and regular injections may be a deterrent to some women. Although both DMPA injections and the vaginal ring are long acting, they require a greater user input than etonogestrel implants. The procedure of insertion of an etonogestrel implant can be associated with bruising and occasionally scarring. Some women will dislike the idea of the procedure or having a foreign body inside them. As previously mentioned there may be access issues related to costs and availability of suitably trained doctors. If the implant is inserted deeply it may require a more invasive procedure for removal.

Contraindications

Summaries of important and common medical eligibility criteria for the three

Table 3. UKMEC Categories* and initiation of etonogestrel implants, DMPA injections or vaginal rings in postpartum women

Situation	Days postpartum	UKMEC Category*			When method becomes effective
		Etonogestrel implant	DMPA	Vaginal ring	
Not breastfeeding	<21 days	1	1	3	Immediately
	⩾21 days	1	1	1	Immediately if menstruation has returned and contraceptive method started on day one to five of cycle† Seven days if contraceptive method is started on day six or later in the cycle or amenorrhoea. Exclude pregnancy first‡
Breastfeeding	<Six weeks	1	2	4	
	>Six months	1	1	1	
Fully breastfeeding	Six weeks to six months	1	1	3	
Partial breastfeeding§	Six weeks to six months	1	1	2	

ABBREVIATION: DMPA = depot medroxyprogesterone acetate. * UKMEC Categories; see below. † Day one is the first day of bleeding in a normal menstrual cycle. Day five is four days later. ‡ See the box on page 37 for how to exclude pregnancy. § Partially breastfeeding is defined as half or less of the baby's feeds are breastfeeds.

*** UKMEC Categories**

Category 1: A condition for which there is no restriction for the use of the contraceptive method.

Category 2: A condition where the advantages of using the method generally outweigh the theoretical or proven risks.

Category 3: A condition where the theoretical or proven risks usually outweigh the advantages of using the method.

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hormonal LARCs are listed in Tables 1 and 3. The vaginal ring has all the same contraindications as the combined pill (see the first article in this series published in the May 2009 issue of *Medicine Today*). Additional considerations are chronic constipation and vaginal prolapse, which may be associated with ring expulsion. Both the available progestogen-only LARCs (DMPA injections and the etonogestrel implant) can be used safely in most women who cannot tolerate oestrogen or in whom oestrogen is contraindicated. Because oestrogen is considered cardioprotective in perimenopausal women and circulating levels drop in women who have DMPA injections, risk factors for cardiovascular disease are considered more seriously in women who have DMPA injections compared with those using other progestogen-only methods.

Side effects

Approximately 50% of women who use DMPA will become amenorrhoeic compared with about 22% of women who use etonogestrel implants.[8] In contrast, approximately 35% of women who use DMPA and 23% who use etonogestrel implants experience frequent or prolonged bleeding. Bleeding patterns tend to establish themselves in the first three to six months of use and for both methods unacceptable bleeding is the most common single reason for discontinuation.[9] It is important that women are well counselled on cycle irregularities before initiation of these methods. In contrast, bleeding abnormalities are a very uncommon reason for discontinuation in users of the vaginal ring.

Weight gain attributable to a contraceptive method is difficult to assess. It is a common complaint for users of both progestogen-only methods but more so for users of DMPA than users of etonogestrel implants. There is no evidence of weight gain in users of the vaginal ring. Other common side effects common to all three methods are headaches, acne, breast tenderness and mood changes. Nausea and vaginal symptoms such as discomfort and increased discharge may occur with the vaginal ring. Loss of bone density, which is likely to be reversible, is an established side effect of DMPA injections.

Drug interactions

For users of the vaginal ring, condoms should also be used while antibiotics are being taken and until the woman has had seven consecutive days of ring use after the antibiotics have ceased. This may mean skipping a ring-free interval and reinserting a new ring at the time the expired one is removed. Neither of the progestogen-only methods are affected by use of antibiotics.

Table 4. Liver enzyme-inducing drugs

Carmazepine
Rifampicin
Rifabutin
St John's wort
Griseofulvin
Phenytoin
Barbiturates
Primidone
Topiramate
Oxcarbazepine

Use of either the etonogestrel implant or vaginal ring for contraception in women taking liver enzyme-inducing medications is classed as UKMEC Category 3 (Table 4). Although this means these methods are not absolutely contraindicated, the Australian recommendation

is that they should not be used as the dose cannot be increased to counteract the more rapid metabolism. In contrast, liver enzyme inducers have no effect on the efficacy of DMPA and its use is classed as a Category 1. DMPA injections are, therefore, often a method of choice for women taking liver enzyme inducers in the long term.

Stopping the method

Etonogestrel levels are undetectable within a few days of implant removal. For women who use an implant or the vaginal ring, return to pre-existing ovulatory pattern is usually rapid. This rapid reversal is of great advantage if a woman is experiencing side effects. In contrast, DMPA cannot be reversed and is detectable in the serum many months after the last injection is given. There is also a predictable delay in return to fertility of up to 18 months after the last DMPA injection.

Special circumstances

Young women

Longer-acting methods of contraception can be suitable for young women. Their use should be discussed if difficulties with compliance with the combined contraceptive pill are identified (see case 1 in the box on page 43).

Excluding pregnancy

Although pregnancy should be excluded before a woman starts any nonbarrier method of contraception, this is most important with progestogen-only LARCs. Case 2 in the box on page 43 examines the issues for a woman returning late for a repeat DMPA injection. The principles discussed emphasise exclusion of pregnancy before initiating any method of contraception.

Bleeding problems

The mechanism for irregular and unpredictable endometrial bleeding with progestogen-only methods of contraception is complex and ill understood. It is important to consider other causes for bleeding, particularly if there has been a recent change, and to have a low threshold for testing for chlamydia, particularly in women aged less than 25 years.

The following treatment suggestions, based on a SH&FPA consensus, can be trialled in women with abnormal bleeding provided that there is no contraindication:

- oestrogens; use for three weeks
  - the combined pill (any brand)
  - oestradiol patch 100 µg per week
  - oestradiol 100 µg daily
  - conjugated oestrogens 0.625 mg daily
- other medications; use for five days
  - mefenamic acid (Ponstan) 500 mg twice daily
  - doxycycline 100 mg twice daily

Case presentations

Case 1. A 16-year-old girl who has difficulty remembering to take the combined pill

Kristy has just turned 16 years of age and presents requesting a repeat prescription of the pill. She has been taking a pill containing 30 µg ethinyloestradiol plus 150 µg levonorgestrel for the past six months and has had no side effects. On further questioning, however, it becomes apparent that she has trouble establishing a routine with pill taking and has been missing several pills a month. She has little knowledge of other methods of contraception but is anxious about her risk of pregnancy and is interested in considering a change to a longer-acting method of contraception.

Kristy lives at home with her father, stepmother and two stepbrothers. She feels unable to discuss contraception needs with her parents. She is in year 11 at a local high school and is doing well. She is in a relationship with Paul who is aged 17 years. He is her second sexual partner.

Although use of DMPA is classed as UKMEC Category 2 for women aged less than 18 years because of bone density concerns, the vaginal ring, etonogestrel implant and DMPA injection all have their pros and cons and each could be used in this age group. For sexually active young women there is no agreed absolute age below which hormonal contraception cannot be initiated. Medical contraindications are uncommon; issues around contraception provision are more focused usually on assessing the young person's maturity in decision making, capacity to consent to clinical management and child protection considerations. Each case should be considered individually with regard to legislation, which varies in different states and territories in Australia. When discussing contraception options with young women it is always important to respect their needs for confidentiality and emerging autonomy in decision making, as well as encouraging parental involvement, where possible.

Etonogestrel implants are an excellent choice for young women. They have an extremely high efficacy rate and for many women will be associated with infrequent or no bleeding problems. There is no ongoing concern about cost or getting to the doctor or pharmacist on time. The implant is sometimes visible and always palpable and privacy may be an issue.

DMPA has broadly similar advantages and disadvantages, although it more commonly causes amenorrhoea and is a very private method. Its main drawbacks are the potential to cause loss of bone density, the need for more frequent medical attention and the unpredictable bleeding that may occur and persist for months after the last injection. There remains a concern about the bone density loss in young women (at a time when they have not yet attained peak bone density) and for this reason DMPA is generally not regarded as a first choice option for such women.

The vaginal ring has the advantages of having an ultra low dose and being associated with good cycle control. It has a high acceptance in young people.[10] It is also a private method and only needs to be administered once per cycle. Its main disadvantages are cost, the need for repeated visits to the pharmacy and the reluctance of some women to use a vaginal method.

After counselling Kristy on available options she decides to try an etonogestrel implant. It is important to offer chlamydia screening and discuss the benefits of condom use for prevention of sexually transmitted infections in this situation.

Case 2. A 27-year-old woman who presents late for her DMPA repeat injection

Jane, aged 27 years, has been using DMPA for three years. She is amenorrhoeic and very happy with the method. She presents at 16 weeks and four days since her last injection. She has continued to have frequent sex and does not use condoms. She is very keen to maintain cover with DMPA as she feels a long stint of condoms will not work in her relationship. A sensitive urine pregnancy test is negative.

It is most important to be aware that the negative pregnancy test does not exclude pregnancy/recent conception. Traditional advice would be to ask Jane to abstain or use condoms for three weeks, review and repeat the pregnancy test and if it is negative give the DMPA injection and advise her to use condoms for another seven days. However, she has already signaled the difficulty with this.

There are a number of issues to discuss with Jane. Firstly, the risk of pregnancy increases with the interval between injections. You may feel on balance that following the traditional path is best, but it may be that she comes back three weeks later and has used condoms inconsistently and you are still unable to exclude pregnancy. Her risk would then be higher than before.

The following factors should be discussed with Jane:

- her concern for any possible effects of DMPA on a fetus in the event of an existing undiagnosed early pregnancy. There are no known teratogenic effects of DMPA on a fetus,[11] although they cannot be absolutely excluded. It is particularly important that women taking DMPA know this as the injection cannot be reversed. Jane feels clear at this stage that if she were to fall pregnant she would seek a termination.
- the importance of excluding pregnancy.

Although Jane is amenorrhoeic, she may ovulate and conceive with no symptoms to alert her to the possibility of a pregnancy, risking a late diagnosis. Jane agrees to return for a pregnancy test in four weeks time and you place her on a recall list as a back up. As she had unprotected sex three times in the last five days you give her emergency contraception and give the DMPA injection. You stress that it is very important that she uses condoms for the next seven days. Jane feels she can manage this.

You check Jane's record five weeks later. She has not returned. You call her and she tells you she did not think it was necessary as she has had a 'period'. She returns and a repeat pregnancy test is negative.

– tranexamic acid (Cyklokapron) 500 mg twice daily.

The treatments listed above have been shown to have some degree of short-term success in controlling abnormal bleeding, but none has been shown to increase the chances of women continuing with the use of the long-term contraceptive method.[12]

Late for changeover/administration problems with progestogen-only LARC methods

Late changeover or administration problems are a common scenario with the progestogen-only LARCs and advice differs between the different regimens. Recent conception/pregnancy cannot always be excluded by undertaking a sensitive pregnancy test in women who have had unprotected sex since their progestogen-only LARC method expired (see case 2 in the box on page 43).

Problems with the vaginal ring

Late changeover for the new ring

For users of the vaginal ring, the principles of late changeover or administration problems are the same as those for the combined pill as discussed in the first article in this series. The most common mistake with compliance is being late for a new ring insertion. Unfortunately, this is also the time of the cycle when the risk of pregnancy is highest if mistakes are made. It is vitally important that a woman decides on a way to help her remember to insert a new ring, such as the free SMS reminder service made available by the manufacturer. If a woman is more than 24 hours late in inserting the new ring after the ring-free interval, she:

- should insert a new ring immediately
- should use condoms or abstain from sex for the next seven days (if this advice is not followed she is at risk of pregnancy)
- is at risk of pregnancy if she has had unprotected sex during the ring-free interval or within seven days after having been 24 hours late or more in inserting the new ring. Emergency contraception can be considered if she had unprotected sex within the last five days.

Early removal of the ring

It is not recommended that women remove the vaginal ring during its three weeks of use. If the ring is removed for more than three hours its efficacy maybe compromised; the woman should reinsert the ring immediately and use condoms or abstain from sex for the next seven days. If the ring was removed for more than three hours in the first seven days of a cycle of use and the woman has had unprotected sex during this time, she should consider emergency contraception. If the ring was removed for more than three hours and there were fewer than seven days of ring use left in the cycle, the woman should skip the ring-free interval and reinsert a new ring immediately after the old one is removed.

Late removal of the ring

The contraceptive efficacy of the ring is adequate for up to four weeks of use; therefore, if a woman has left the ring in place for more than three weeks but not more than four weeks, she:

- should remove the ring
- should have a shortened ring-free interval and then insert a new ring as had been initially scheduled (28 days after the current ring was inserted)
- does not require any further protection.

If a woman has left the ring in place for more than four weeks, she:

- should remove the ring
- should immediately insert a new ring
- should use condoms or abstain from sex for the next seven days (if this advice is not followed she is at risk of pregnancy); and
- is at risk of pregnancy if she has had unprotected sex after the ring has been left in place for more than four weeks. Emergency contraception can be considered if a woman has had unprotected sex in the last five days.

Conclusion

LARCs are underused in Australia. Each of the three methods discussed in this article have many advantages. They are less prone to issues with compliance than the more commonly used combined pill, and they have a great potential to reduce unplanned pregnancies. It is important to include a discussion of their use in routine contraceptive counselling and encourage uptake, particularly in women who are at high risk of unplanned pregnancies. MT

References

A list of references is available on request to the editorial office.

COMPETING INTERESTS: Dr McNamee has provided expert opinion for Bayer and Schering Plough as part of her employment with Family Planning Victoria. She has received support for conference attendance from Organon (now Schering Plough). Dr Harvey has provided expert opinion for Bayer and Schering Plough as part of her employment with Family Planning Queensland. She has received support for conference attendance from Organon (now Schering Plough).

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